# MANUFACTURERS RECORD

A Weekly Newspaper Devoted to the Industrial, Financial, Railroad, Mining, Contracting, Engineering, Building, and General Business Interests of the South and Southwest

Vol. 60 No. 12

ber

ESTABLISHED 1882

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# In This Issue:

Vast Work in Southern Development Still to Be Done.

Governor Mann of Virginia Leading in Practical Education.

Holland as an Exemplar for Louisiana in Drainage.

The Water Resources of Oklahoma.

Alphabetical Index, Page 114. Classified Index, Pages 108 to 113. Classified Opportunities, Pages 76, 77 and 78.

BALTIMORE, SEPTEMBER 28, 1911

# THE MEASURE OF HEAT

The term British thermal unit (abbreviated B. t. u.), often confronts the user of coal.

As a yard stick is a measure of length, a B. t. u. is a measure of heat. The total amount of heat contained in a pound of fuel, all of which is liberated by complete combustion, is expressed in B. t. u's. A single heat unit is the amount of heat required to raise the temperature of one pound of water one degree Fahrenheit at atmospheric temperature. Heat units make steam and steam makes power.

Below are tabulated, from some of the highest scientific authorities, the heat values of the commoner combustibles contained in coal:

B. t. u. Per Lb. SUBSTANCE 21,465 23,515 Included in the "Volatile Matter" Acetylene Gas Marsh Gas -21,345 of proximate analysis. Olefiant Gas 62,035 Hydrogen Gas "Fixed Carbon" of proximate 14,450 Carbon analysis.

### CLINCHFIELD COAL IS HIGH IN HEAT VALUE

Clinchfield coal is rich in Hydrogen and the Hydro-Carbon gases shown above. These "VOLATILE" gases burn above the fuel bed with rapidity and great intensity in close proximity to the boiler surfaces. Quick liberation of heat units means quick generation of steam; hence the economy in using Clinchfield coal which maintains boilers at high capacity easily and continuously, thus delivering more than the rated horse-power. Clinchfield coal ranges from 14,000 to 14,700 heat units per pound, because it contains small percentages of oxygen, moisture and ash, which are valueless, and large percentages of the combustibles highest in heat value.

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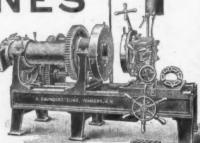
All Sizes for Pipe Mills Gas and Steam Fitters

This cut illustrates No. 5 and No. 6 Machines.

No. 5 has a range of 11/4 to 6".

No. 6 has a range of 21/2 to 8".

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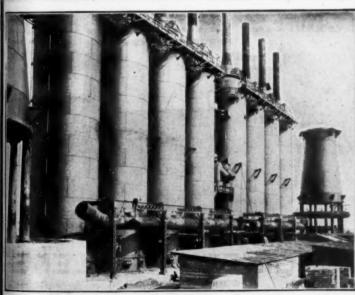
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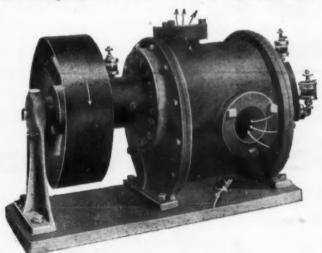
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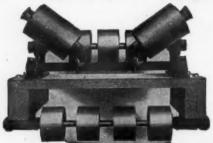
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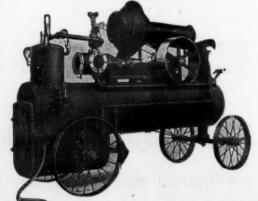
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# AMES IRON WORKS



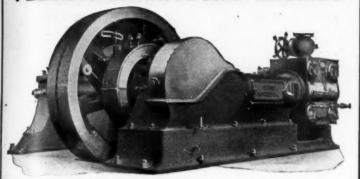
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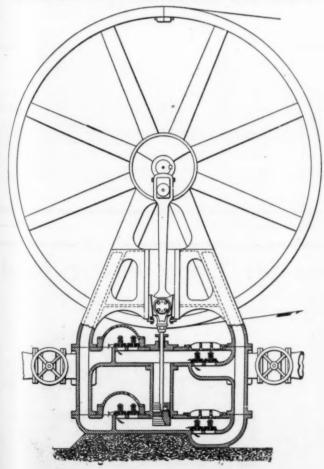
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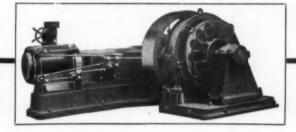
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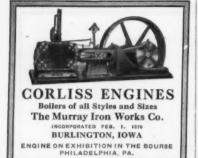
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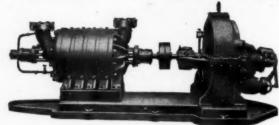
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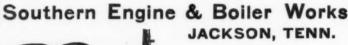
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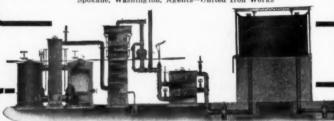


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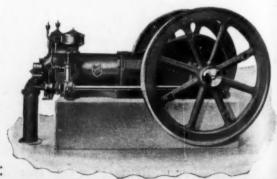
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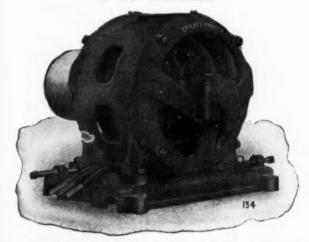


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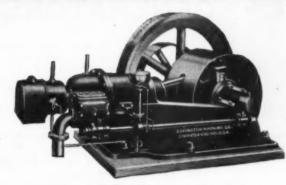
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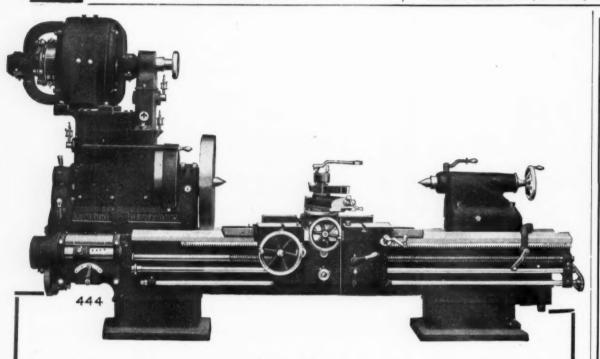
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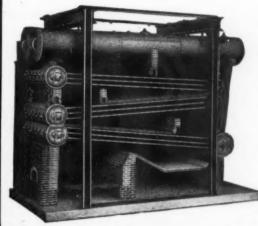
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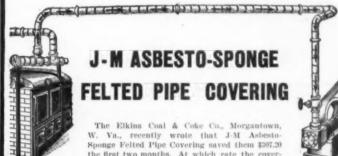
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be wasted through condensation.

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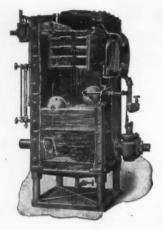
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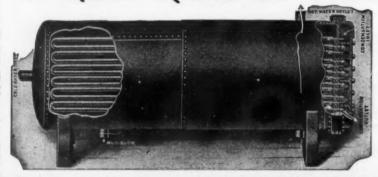
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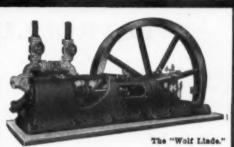
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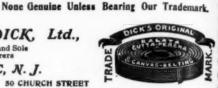
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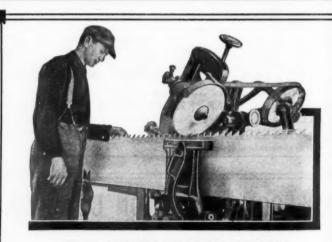
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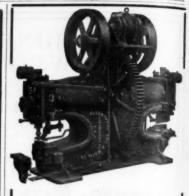
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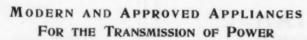
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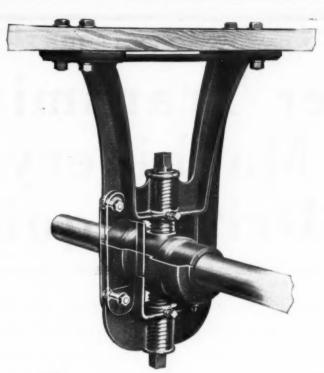
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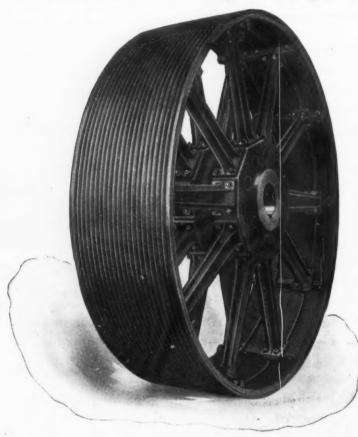
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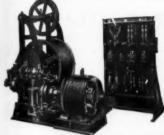
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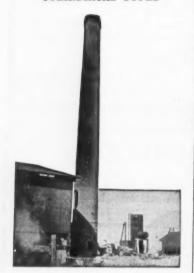
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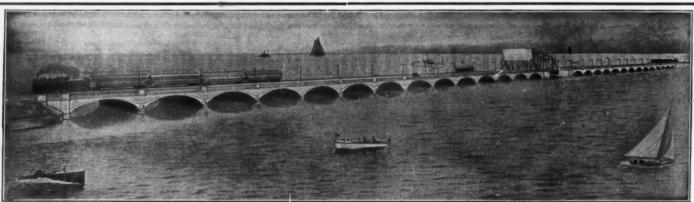
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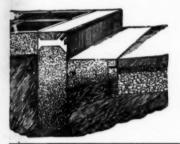
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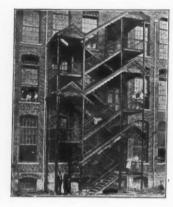
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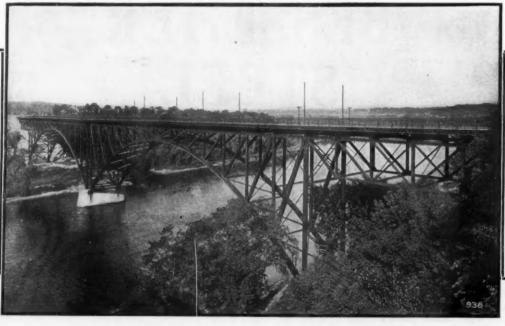
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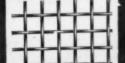
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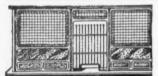
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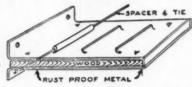
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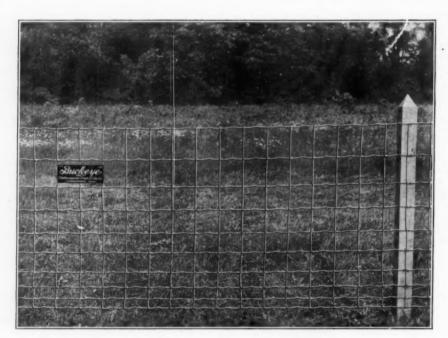
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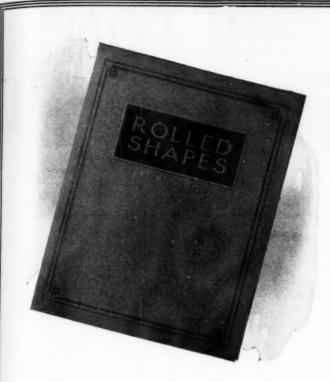


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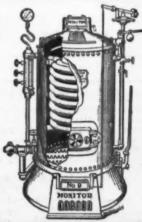
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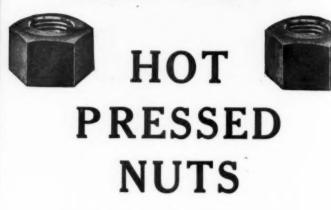
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Our Red Oxide of Iron Paint is unexcelled for tin, iron and shingle roofs, railroad cars, bridges, barns, and any place where protection from the weather is desired. It is used by many of the large carriage and wagon manufacturers and paint grinders in the United States.

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And the time to find out is before you buy—it is often costly to find out afterward.

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the Trinidad-Lake-Asphalt Roofing

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Is made of natural asphalt.

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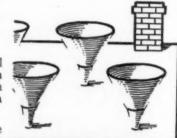
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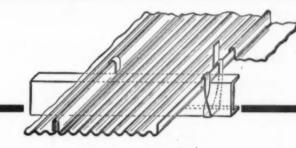
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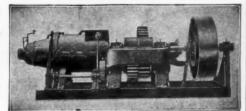
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Manufacturers of Lumber, Ties, Timber, Piling, Poles and Paving Blocks

ATLANTIC TURPENTINE AND REFINING CO.,

Pure Wood Turpentine, Pine Oils, Pine Tar, Oil of Tar

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#### WATER-WORKS SYSTEMS For TOWNS and VILLAGES

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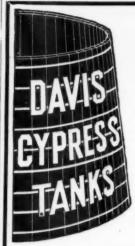
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# WATER TOWERS ALL OVER THE U.S.

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The apparatus is centralized and under one man's

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**MEANS ECONOMY** 

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# Manufacturers Record

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

Trade-Name Registered in the U.S. Patent Office

Vol. LX. No. 12.

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#### BALTIMORE, SEPTEMBER 28, 1911

\$4.00 A YEAR. SINGLE COPIES, 15 CENTS.

### Manufacturers Record.

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BALTIMORE, SEPTEMBER 28, 1911.

#### BIG WATER-POWER UNDER-TAKINGS.

Water-power sites on the Tennessee, Coosa and Tallapoosa rivers in Alaama under option to Eastern people will more than likely be taken over in the near future and a company organized for their full development and the transmission of electric power over a large part of Alabama and Tennessee. The scheme is one of very great magnitude. It is reported that English apitalists are interested in this enterprise, as well as in the Georgia Railway & Power Co., particulars of which were given last week. The Alabama Interstate Power Co. will probably be the name under which these various powers will be consolidated when developed. If carried out on the scale planned, this undertaking will probably equal in importance that of the Georgia Railway & Power Co., which will represent a apitalization of over \$50,000,000, even if ultimately it does not exceed the latter in the magnitude of the powers to be utilized.

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# RICH FARMS REPLACE FORMER SWAMPS.

A notable example of the possibilities of land drainage is found in the work that has been carried on and is still being energetically prosecuted in Southeast Missouri, where 500,000 acres are being reclaimed. In the Little River district, including Cape Giradeau and seven other contiguous counties, more than 1000 miles of ditches have been than 1000 miles of ditches have been created, and homes for thousands of families have been provided upon land which was previously entirely flooded. Corn crops have been raised this senson

en land which last year was covered with in some cases as much as ten feet of water. The St. Louis Post-Dispatch presents the following description of the work along the Little River, which gives a clear idea of the remarkable work that can be performed by the giant dredges now being produced by the leading manufacturers:

It was astonishing to remember that only three months before, where this canal bed lies over which the boat glides unimpeded, the swamp had been thickly beset with cypress trees and knees; that surveyors had painfully floundered through it often up to their waists in water. The romance of this age of machinery was felt when it was realized that this canal, 30 feet wide, 9 feet deep, and 50 miles long, including laterals, had been bitten out a few cubic feet at a time by a dredge boat. The scene in front of the dredge, unlike that behind it, was wild in the extreme. There were thousands of tree stumps, as far as the eye could see, with takes of stagnant water, little patches of emerging mud and quicksand, and the great ferest of cypress ready to be made into the finest of telephone and telegraph poles. It seemed incredible that the huge dredger could claw its way through this jungle of logs, stumps and mire, leaving a channel behind on which a large boat could navigaie. But such is its power that it advances 200 yards every working day, and will soon reach the river.

Such is the development of modern excavating and dredging machinery that the owners of swamp lands and riverbottom lands have no hesitation on that score in going ahead with the converting of these fertile lands into valuable farms. The successful progress already made in Southeast Missouri, in Louisiana wet lands, in Florida, in North Carolina and similar projects give promise of still greater undertakings of this kind in the near future. Millions of acres are now being drained in Louisiana. Florida and elsewhere, and land hitherto valueless is becoming immensely valuable.

# SOUND SENSE OF CANADA ON RECIPROCITY.

In his speech in the closing days of the Flfty-first Congress on the reciprocity treaty with Canada, Speaker Champ Clark said of the Canadians:

They are trained in the difficult art of self-government.

Striking vindication of that estimate has been given in the rejection by the Canadians of the reciprocity treaty. Training in the difficult art of selfgovernment fits an intelligent electorate to decide public questions to its own advantage. Canadians were more fortunate than Americans on this side of the line, in that they had opportunity to pass judgment at the polls upon the reciprocity scheme. In this country the promotion of that scheme signally demonstrated the necessity for greater safeguards than now exist about the treatymaking power, whether related to commercial questions or to theories embodied in the arbitration idea. It was not until after the Congressional election, in which voters ought to have had opportunity to give expression upon such a far-reaching and important question, that Canadian reciprocity was suddenly pushed to the front. The idea in the word reciprocity appealed immediately to a certain superficial state of public mind not yet, in spite of many recent examples to the contrary, aware that such words as reciprocity and arbitration may be used to promote, under cover, measures that deny the fundamentals of reciprocity and arbitration and to bring about results exactly opposite to the wishes of misguided supporters. So much was at stake in certain limited quarters that failure of the Congress to ratify the treaty led to the posthaste calling of the disastrous special session for the ratification, still without opportunity for the people to vote intelligently on the proposition.

American voters were debarred from rebuking the essential insincerity of the treaty and of the methods to induce its ratification. Only indirectly could they raise objection to the manifest buncombe in the plea that farmers on both sides of the line would be benefited by a free interchange of their raw products, while, at the same time, the masses of consumers were to rejoice in a lower cost of living. Through the device of pretending to combat reciprocity, some of the few great interests that alone would have been benefited by it managed to obscure in the public mind the fact that relaxation of tariff duties on certain materials without affecting the duties on goods manufactured from such materials was but another form of the false pretense underlying the earlier campaign for free "raw materials" for manufacturing. Few students of the situation realized that Canadian reciprocity was but preparation for the greater stake involved in reciprocity with Mexico, thus given precedent. The attitude of the real promoters of reciprocity was that the American people should be treated as an aggregation of good-natured fools.

On the other hand, the chance was given in Canada for the matter to be thoroughly threshed out by a people trained in the difficult art of self-government, so trained as to judge a man not by what he says or hires others to say for him in disguise, but by what he and what he does. They readily perceived that reciprocity was not for the benefit of the masses of the people of Canada and the United States, but was merely a medium for the exploitation of those masses by a few selfish interests unable to interpret the signs of the times. Those interests' habitat is in the United States, but they have large investments in "raw materials" in Canada. Reciprocity as embodied in the Canadian treaty would have permitted the exploitation of these resources to the disadvantage of Canada without a single real advantage to the people of the United States as a whole.

The Americans on this side of the line should be thankful to the Canadians for showing them that the difficult art of self-government is not yet a lost art on this continent.

#### VAST WORK IN SOUTHERN DEVELOPMENT STILL TO BE DONE.

It was only some six or seven years ago when one of the foremost business men in New Orleans, who had for some years taken a leading part in the effort the people of the city were making to develop not only New Orleans, but the whole State, wrote the Manufacturers RECORD that "as Louisiana has no mineral resources whatever, its material development will have to be based on other things." He had entirely overlooked the vast salt beds, possibly the greatest in the world; the sulphur deposits, which since then have made Louisiana sulphur dominate the world's sulphur trade; while at that time nothing had been published about the almost unlimited possibilities for chemical industry based on the salt and sulphur and other mineral resources of the State. The great gas and oil fields of Louisiana had not then been discovered. Now it is recognized by experts that Louisiana presents today the most inviting field in the world for the development of vast chemical industries, and that its great stores of oil and natural gas make possible other lines of manufacturing on a very large scale.

The business man to whose letter we have referred was probably as well posted about Louisiana as any man in the State, and yet so little was generally known about its mineral resources that he broadly said that Louisiana had no mineral resources, and, therefore, other lines of industrial development must be considered.

What has been accomplished in Louisiana since that letter was written is typical of what may be accomplished in many parts of the South, for there are still great resources unknown to the people of this section as well as to those of other sections. Florida, for instance, is looked upon by 990 people out of a thousand as a land of oranges and grapefruit and kindred interests, a land whose winter climate annually makes it a haven of rest and recreation for thousands of visitors, and not State of great industrial possibilities. But Florida has far more than oranges and grapefruit and trucking and climate, great as these are. In fact, Florida has very great mineral resources for the development of manufacturing as yet scarcely known. The time may e when the manufacturing interests of that State will rival in importance the tourist business

It was about twenty-three years ago when the discovery of phosphate rock there turned the attention of investors in the fertilizer industry of the world to that State as a source of supply of rock upon which the world's fertilizer industry largely rests. So rapid has been the development of phosphate mining that that State now has an annual output of over 2,000,000 tons of rock, much of which is shipped to Europe. The fertilizer industry of Europe as well as of this country is to a large ex-

tent dependent upon Florida as the source of its raw material. One may regret, in view of the exceptionally high grade of Florida rock and its dominating position in the world's fertilizer industry, that it does not command a very much higher price and yield to the State a very much larger profit through the development of the fertilizer industry in Florida, rather than the shipment of the raw material. However, the industry is one of the most important in the State. It is quite probable that other discoveries of equal importance to phosphate rock are yet to be made in Florida. It is a State in which vast quantities of fuller's earth are to be found, where cement material is yet to be utilized, where great beds of neat may be made to supply cheap fuel, and, with the development of the Everglades, now under way, will come the possibility of creating one of the greatest sugar-producing regions of the world. In 1887 Hon. Wm. D. Kelley of Pennsylvania, then known as "The Father of the House of Representa-tives," made a trip to the Everglades region of Florida and wrote for the MANUFACTURERS RECORD an exceedingly interesting four-page article on the possibilities of sugar-growing in that State when the reclamation of that vast re gion should come about. Hamilton Disston, the great sawmaker of Philadelphia, who had seen this situation, had undertaken the reclamation of a large area, but Disston was in advance of the day, and Kelley's prediction was that of the prophet based on known facts rather than on the achievements then possible. Now that the actual opening up of the Everglades with its 6,000,000 acres of land, about equal in area to the State of Maryland, is under way, the fulfillment of Judge Kelley's prediction and the realization of Dissdream about sugar-making will doubtless be fulfilled.

Throughout that State there are possibilities for manufacturing which should receive the most thorough investigation by State and railroad authorities. It would be wise in the absence of State action in the establishment and maintenance of an amply equipped geological survey or in connection with State work if the railroads of Florida and other Southern States would each for its own territory establish a scientific investigating department to make a thorough study of every mile of territory tributary to them. No better investment could be made.

Mississippi, like Florida, has been regarded as pre-eminently an agricultural State, and but little thought has been given by the world at large to its manufacturing possibilities. But Mississippi has unusual conditions for the development of industrial activities. Its great wealth of standing timber, both hardwood and pine, should make it a center for the furniture manufacturing industry. It has many minerals which could be utilized to great profit. The development of diversified farming and the raising of live stock are making possible the creation of great packing-house inter-The immense packing industry which within the last few years has been developed in Oklahoma and Texas could be duplicated in Mississippi and

Resources and advantages for manufacturing such as these, as yet too little appreciated, may perhaps yet almost match in importance in future development the resources that are known. No one would undertake today to say that Louisiana has no mineral re-

sources, but nearly all that is known on that subject is the outcome of the last few years. And yet the mineral that State are great enough, if wisely utilized, to make Louisiana the center of the chemical industry of the world, as it is today the center of the sulphur industry of the world. In Mississippi, in Florida and other States in which comparatively little attention has been given to search ing out these unknown things, there are great possibilities. Scarcely a day passes without bringing something new and of great importance to light, was only a few years ago, as recently stated by a leading railroad officer of the West, when he heard the Governor of Iowa say that that State must neces sarily remain wholly an agricultural region, and that it could never develop into a manufacturing center. Iowa, on the contrary, is becoming a great manufacturing section, but its possibilities for manufacturing are insignificant as compared with the resources for manufacturing to be found in Florida, in Mississippi, in Louisians and in other parts of the South which have not yet come to the front as manufacturing enters except in the lumber industry. Great are the resources yet to be un-

covered. Great will be the wealth created by their utilization.

### TO PROMOTE SAFETY ON RAILROADS.

Directing their attention to the very large number of railroad acidents attributable to neglect or carele upon the part of employes, A. H. Kilpatrick, a claim agent of the Chicago, Rock Island & Pacific Railway, who is quoted in the Arkansas Gazette of Little Rock, said to a meeting of trainmen, trackmen and station men of the Arkansas division that 80 per cent. of the 1094 serious accidents which occurred last year in this country were due to failure of human agency, or, in plain language, the employes were responsible for them, while 20 per cent. could be laid to mechanical failure or to the companies. He appealed to his hearers to make every effort to reduce the number of accidents, saying that the company would do its part toward providing the safest and best equipment to protect their lives and the lives of passengers

Continuing, he said that the companies paid men better wages than were paid to mere laborers, because brains were desired. Labor could be bought for \$1,50 per day, but when more than that was paid the difference was for brains. Thus the conductor or engineer who received pay amounting to \$5 per day received \$1.50 for muscle and \$3.50 for his intellect. Therefore, if a man got more per day than was paid for mere labor, the company had a right to expect him to work with his head as well as with this muscles. Moreover, the railroads have not obtained all the good and efficient men they want; they are willing and anxious to obtain more and pay more for them. He urged the men to impress their employers by their work that they were experts in their way: that they were willing to accept more responsibility, and to show that theye were worthy of it. "If you want to be efficient," said Mr. Kilpatrick, in conclusion, "keep your thinker at work all the time. \* \* \* Don't be satisfied all the time. \* \* Don't be satisfied with doing just enough to keep your name on the payroll." He pointed out that the time would come when a Government commission of some kind would inspect the ability and efficiency of employes in order to minimize the dangers of railroads.

The injunction "Keep your thinker at work all the time" is one deserving of remembrance not only by railroad men, but by all employes-and for that matemployers. If thinking is not done, there cannot be progress toward the perfection which all right-minded men desire in their work, as in other things in which they may be interested. The mistakes which are made are largely responsible for the vast waste of nervous force, and also for the worry, that produces nerve exhaustion, of which so many business men complain nowadays. Carelessness causes mistakes; thoughtfulness tends to prevent them. simple it seems to avoid errors; yet how difficult it is to escape them when depending upon individuals who are indifferent concerning their duties. None knows this better than a railroad man, for in train operation mistakes are costly in the extreme.

In such stirring words as those uttered by the Rock Island's claim agent. employers may now and then stimulate organized forces to better, thoughtful endeavor, provided that they are accompanied by evidences of fellow-feeling and proper example. Most men want to progress, but do not know how, and they sometimes become discouraged because appreciation and success do not come to them as soon as it is imagined they should. Judicious employers remember these things, and administer words of encouragement, for every wise manager is anxious to increase the earning power of his forces. But human sympathy is the principal stone in the foundation of successful management of large organized bodies of men; if that be apparent, the rest comes easy to the officer in charge.

The effort to increase the safety of our railroads will be observed with deep interest, but it will require the utmost patience and perseverance, combined with unceasing good temper, on the part of railroad officers to cultivate among the file of employes (not to mention the rank, which here and there doubtless needs some attention) a spirit of earnestness and vigilance, without which progress in the desired direction cannot be made.

#### CONCENTRATION AND CLASSIFI-CATION IN ADVERTISING.

An advertiser in the Manufacturers Record, referring to the increaseing number of houses competing with him now advertising with us, writes:

This pleases me. I am different from some of our competitors. I like to see all of our competitors in, and all in a bunch. In other words, all classified together. We think it gives a cumulative prestige.

This advertiser states the case His view is a correct one. There are some business men who are so short-signted that they do not want to advertise in any publication unless their's is the only advertisement of its kind. They do not take the broad view of the matter that our correspondent does. He not only wishes to see all others in his line advertising in the same paper in which he advertises, but he wants to see all of the advertisements bunched, believing that each one in this way gets the cumulative benefit of concentrating attention on this particular line of goods through such an aggregation of advertisements.

It is very much on similar lines that great business interests concentrate in particular localities. In New York, Wall Street is the center of financial

operations, every important bank desiring to be located in that locality, The proximity of these banks is an advantage, rather than a disadvantage, to each one. The wholesale dry goods trade in every city in which there are many houses in this line concentrates in a particular locality, just as do other branches of business. Even professional men prefer to be in the immediate neighborhood of their competitors or rivals. This is such a universal law of business that it has often seemed surprising that some advertisers do not recognize its value. Many who advertise in the same paper with competitors are yet anxious to have some separate classification, so that their announ ment will be in a different part of the paper from any of their competitors, This is a mistaken policy. Advertisements ought to be concentrated in a newspaper, just as various business interests concentrate in their operations, The classification of advertisements is a convenience to subscribers, enabling them to find what they want with the least delay and the least trouble. Whatever, therefore, benefits the subscriber, benefits the advertiser. In serving the subscriber's interest by so classifying advertisements as to assist him in mak ing a study of those who produce the kind of goods he desires, without the necessity of hunting through different parts of the paper, classification is profitable to the advertiser. Big whole sale houses or financial concerns would regard it as the height of folly to suggest that they should not locate in a particular district because other banks or other wholesale houses were established there. It is for that very reason that they would be anxious to get there. This gathering into limited areas of particular business interests benefits the buyer, whether he be buying money or dry goods or leather. He is enabled to come in quick touch with all the in terests with whom he is doing business, and in benefiting the buyer such concerns are benefiting themselves. The same rule holds good in advertising matters.

# MAGNITUDE OF LAKE ORE TRAFFIC.

The award of contracts by the Pennsylvania Railroad Co. for the construction of an unusually large ore-handling plant at Cleveland calls attention to the magnitude of the ore-carrying business of the Great Lakes, as did the spending of \$7,000,000 to improve Ashtabula harbor. This traffic is constantly growing to keep pace with the world's require ments, and facilities have been enlarged from time to time, but the machinery which is to be finished at Cleveland in time for the carrying season of 1912 is described by the railroad company as exceeding in capacity any yet built. It is expected that it will handle the contents of two large steamers per day, or from 25,000 to 30,000 tons. The buckets of its four unloaders will each carry 17 tons, although the largest now in use is 15 tons. In other particulars the machinery will be of greater capacity, 80 as to provide for bigger vessels in the future. A reinforced concrete dock is also to be constructed, besides other facilities. In describing these improve ments, the company's announcement says:

The great strides recently made by the iron industry in the lake country is almost beyond comprehension, and the Pennsylvania has been constantly making improvements to keep pace with them. In one year 40,000-000 tons of ore were taken through the Detroit River, From the ore fields, where

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steam shovels that scoop up from four to eight tons at a time are constantly lifting their giant arms, each one digging from 4000 to 8000 tons a day, over 800 vessels are engaged in this traffic. They can transport more than 3,000,000 tons in a single trip, and practically all of it goes to Erie ports to make rall connections. In a year these boats burn in the neighborhood of 3,000,000 tons of coal, or enough to heat every home in Greater New York for the same length of rime.

greater New York for the same length of time.

Supendous as are the operations on the seese where the "ugly wealth" is being taken from the ground, the mechanism for handling cargoes at the receiving end is eren more astonishing. The vessel is run under a huge unloading machine that thrusts steel arms down into 20 or more hatches, and the cargo is emptied with a rapidity that seems little short of miraculous. The record of one boat that discharged 8514 tons at the Pennsylvania's docks in three hours and forty minutes gives an idea of the speed that has already been developed. But with the completion of the Pennsylvania's new plant at Cleveland, records like this will case to be cause for wonder in this country, where men think in millions of tons.

These liberal expenditures upon port facilities are impressive evidence of the vastness of the ore traffic, and also of the unceasing efforts upon the part of the railroads to adequately provide for handling it without delay.

#### ARE SOUTHERN RAILROADS MEASURING UP TO THEIR OPPORTUNITY IN SOUTH-ERN DEVELOPMENT?

Mr. A. W. McLean, president of the Virginia & Carolina Southern Railroad Co. writing from Lumberton, N. C., savs:

I have just read with very much interest the article entitled "Railroads Not Measuring Up to Their Opportunity in Southern Development." I heartily concur in everything you have said. I have thought of this matter many times and have often wondered why the large railroads of the South have continued to pursue the neglectful course which they have followed for so many years in regard to development of the territory

continued to pursue the neglectful course which they have followed for so many years in regard to development of the territory adjacent to their rails.

Our county here adjoins the county of Sectland, mentioned by Mr. Pride as being so productive, and our soil is practically the same. We have just as good results in our county and the county of Bladen, through which my road runs, though a small road like mine cannot undertake this method; but it seems to me that the large roads mentioned could undertake it.

I have traveled a good deal in the West and have been particularly impressed with the wonderful development taken place, put there almost entirely through the instrumentality of the large railroads. There is no section of the South with a more productive soil or finer climate than we have right here in the section of the cotton belt, and yet not more than 10 per cent. of the lands are in cultivation. What we need here is more population and more money for development.

Realizing as I do the fact that you have

relopment.

Realizing as I do the fact that you have done more than any other one man for the cause of Southern development, I had thought of the idea of suggesting to you that you undertake to have a meeting of the railroad presidents interested in the South and discuss this matter with them. I believe that the savet the learn that the savet t lere that they are thinking more about this matter than they have ever done before. If I can be of service or if you can make any further suggestions, please let me know.

Mr. McLean is correct in his statement that he believes that the great railroad interests of the South are thinking more about the development of this section through wide publicity than they have ever done before. And what a magnificent opportunity the South presents for such work! Mr. McLean says of his county: "There is 100 section of the South with more productive soil or finer climate than we have right here in this section of the cotton belt, and yet not more than 10 per cent. of the lands are in cultiva-What we need here is more population and more money for develop-This is a fair statement of a

shovels that scoop up from four to very large part of the South. It is a country justifying publicity: a country that will make good; a country upon which nature has poured its richest blessings. In every portion of it some particular advantages can be found, and in a very large portion of it nearly all advantages of all other sections are found without their most serious dis-advantages. Some Southern railroad officials have done a great work for Southern upbuilding, broad and farseeing, but not all Southern railroads have waked up to the full opportunity. Many of them have done so, and, as Mr. Mc Lean says, they are thinking about this more than they have ever done before. It is a hopeful sign for Southern advancement that practically all the great railroad leaders are thinking about the situation, are recognizing the possibili-ties of their country and are studying methods adopted by the Pacific Coast and Canadian roads. But for the agitation against railroads during the last ten or twelve years this activity on the part of Southern roads to attract attention to the South would have come about long before this and on a much larger scale. Hampered and restricted as they have been by legislation of many kinds, much of which was wholly unwise, while some of it, of course, was badly needed and justified, the railroads of the South for the last ten years have had to meet the perplexing problems of reorganization in financial and business affairs, the adjustment of their operations to meet the varying conditions of national and State legislation, until their officials have had but little time to give to the broader work of material upbuilding. Even under these condi-tions some have been doing very broad and effective work. We hope the time is not distant when Southern railroads will be able to measure their work side by side, shoulder to shoulder, with the railroads of the Pacific Coast and Canada in the broadest national advertising compaign. Not until then will they fully utilize the magnificent opportunity which is before them.

#### ALABAMA EARNEST FOR GOOD ROADS.

The Alabama Good Roads Association, of which Capt. John Craft of Mo-bile is president, is making a determined effort to give the State an ade quate system of improved highways. It has determined to take an active part in the State campaign of 1914 to the end that the Legislature and the next Governor may make as a fundamental ques tion a State bond issue of \$50,000,000 for the construction of good roads. The association contends that the purpose is has in view cannot be carried out thoroughly through county bond issues, and that the State can float its bonds at a lower rate of interest than indi-vidual counties. Meanwhile, President Craft, as chairman of a special committee in Mobile county, has drafted a report containing practical recommendations for the expenditure of \$500, 000 to be realized from the sale of county bonds. These recommendations, which insist upon the importance of maintenance of roads, culverts and bridges after they have been constructed upon modern lines, may be applied with profit to the whole State, and even to the South generally. The practice of railways in building the highest class of roadbeds, in paying especial attention to drainage and in having constant supervision by section gangs for the perpetual care and maintenance of the

mind in building roads in the State. Among the recommendations of Captain Craft's committee are that all roads constructed be of permanent character, and that a maintenance force be employed; that all roads be constructed of material which will promote permanency and for the purpose of accom-modating the automobile; that a toll road in the county should be purchased, as the day of such roads has passed, and that a citizens' advisory committee be appointed to act with the county board. The character of materials for roads in various sections of the county are discussed and the construction of concrete culverts and bridges is urged. Seventeen roads beginning at the city limits of Mobile and representing a mileage which will serve about 85 per cent. of the population of the county are mentioned as the ones to be improved, leaving other roads of the county to be handled with the revenues of the county and the aid of convict labor. In conclusion, the report says:

Your committee is convinced that good roads, culverts and bridges, with perpetual care, is the country's greatest asset and will contribute more to populate our waste lands with farmers than any other enterprise that your honorable body could engage in. Good roads, bridges and culverts are our best medium of advertising our wonderful climate and soils. and soils.

#### THE WORLD-WIDE HIGH COST OF LIVING.

Recent dispatches from various parts of Europe tell of riots and other serious troubles brought about by the high cost of foodstuffs. A dispatch from Belgium

With butter quoted at \$1.50 a pound and other necessities costing proportionately, food rlots continued throughout Belgium today. So serious has become this protest against the high cost of living that butchers and provisioners have armed themselves to protect their property against the thousands of women who are storming the market-places and looting right and left.

That dispatch was followed by one from France which said:

A flerce battle occurred here today when a large mob of cheaper-food manifestants engaged the troops. At least 40 persons were injured. Twenty policemen and soldiers were badly hurt by stones, bottles and missiles thrown at them by the mob. The troops repeatedly charged into the crowd, and an equally large number of rioters were injured by being struck by sabers or by being trampled upon by cayalry horses. trampled upon by cavalry horses.

From Paris on the same date came the following dispatch:

Reports that women were parading the streets to protest against the high cost of food, and that the rougher element was engaged in plundering shops, were received today from Valenciennes and Roubaix.

From Berlin, the daily papers had:

Signs of unrest are not lacking anywhere in the great industrial centers where wages in the great industrial centers where wages have not kept step with the rapid advance in the prices of the necessities of life. In the metal trades throughout Prussia, Sax-ony, Bavaria and Wurtemburg many thou-sands of men are either on strike or locked out, and there is also serious unrest among the employes of the Berlin street-car system, which threatens to culminate in a complete cossation of work unless their demands are satisfied.

These dispatches, which are types of many that are coming from Europe, show that the Old World is facing the higher cost of living just as is this country. The uninformed reader of American daily papers would suppose that the high cost of living is to be found in this country alone, and here it is attributed by demagogues and by honest but mis-informed people to the tariff, to trusts or combinations, to railroads and to everything else but to the right cause. The people of this country have been work is suggested as one to be kept in absolutely misled by demagogic agita- ing, and until gold production halts in

tion in the press, in Congress and at times in the pulpit. Advancing cost of living has been charged against grind-ing monopolies and against the tariff until there has been created a spirit of unrest, of hostility to all corporations, which bodes no good to the country. No intelligent man who has cared to study the situation in the last 10 years need to have been misinformed on this subject. In the first place, a rapid growth in city population, which is going on throughout the world at the expense of the country districts, is increasing the number of consumers of farm products far more rapidly than the number of producers is increasing. No man who has watched the city trend of population, the amazing growth in the last quarter of a century of the cities of the world, ought to have been surprised to find a steadily-increasing higher cost of living by reason of this fact alone. Au economic change has been under way, and during the last 10 years the farming interests have been getting the benefit of this change at the expense of the consumers of farm products. But be-yond that is still another mighty economic change which is working its way through all the circles of trade and in-dustry throughout the world, and that is what has been described as "the coming deluge of gold." In 1905, under that heading, the Manufacturers Record gave some startling figures as to the enormous increase in the world's production of gold in recent years, and commenting on these figures said that this would result in revolutionizing changes and "necessarily of a higher range of prices and of advance in wages such as mankind has never known." In 1907, returning to the same subject, it

In studying these figures every thoughtful man must be impressed with their signifi-cance and with the tremendous influence of this gold output upon the expansion of the world's trade and commerce, of a steadily rising cost of living, which necessarily means high wages, of a great increase in the value of landed properties.

In 1908 we republished from Harper's Weekly an article by Mr. Byron W. Holt, in which he said:

Holt, in which he said:

No other economic force is at present in operation in the world of more stupendous power than that of gold production. • • From the beginning of financial civilization such periods have always been periods of ising prices and wages, of great industrial development, of new and huge enterprises both public and private, of inflated credit, of speculation, of political and social unrest, of radicalism and reform. Such a period we are now passing through, though we have perhaps only entered it. Our past troubles from rising prices, high interest rates, increased cost of production and social discontent may have to be multiplied several times before the end of the next decade. • • Rising prices and interest rates increase the before the end of the next decade. \* \* \* Rising prices and interest rates increase the cost of materials and of operation and tend to decrease the net profits of railroads, street railways, gas companies and other public service corporations, the prices of whose products or services are either fixed by law or virtually fixed by custom. For this reason there is much trouble ahead for this class of corporations as soon as prices and interest rates begin to rise rapidly again. By 1960 or 1910 freight and passenger rates must of necessity be advanced. Politicians, backed perhaps by public sentiment, will probably try to prevent these advances. Great friction is likely to result.

In studying the business situation and the rising cost of living it is well to remember that Europe is facing the same problem, and that, therefore, all of our troubles are not due to the causes which in and out of Congress have been charged with this responsibility. Until the pendulum swings the other way and the high prices of foodstuffs drive population back from the city to farm-

its annual increase, we are not likely to see any material decline in foodstuffs. An industrial and financial panic severe enough to throw out of employment hundreds of thousands of people might so lessen the demand for foodstuffs, or, rather, the ability to buy foodstuffs, as to temporarily retard the high prices, but without such a check, so disastrous in its consequences as that would be, we might as well seek to adjust every business interest to the higher cost of living, recognizing that economic forces beyond the control of man are at work to bring this result about.

#### POTASH FROM FELDSPAR?

If the efforts that are being made to produce potash from feldspar should prove successful on a commercial scale, a subject which is now receiving more or less discussion throughout scientific circles, we would again have an illustration of the fact that "Necessity is the mother of invention." For years scientistis have searched the world for new sources of potash. As we recently stated, Mr. Edward Atkinson some years ago in a letter to the MANUFAC TURERS RECORD said that the man who would discover a new potash supply sufficient for the needs of the day would be doing humanity a greater service than the one who discovered a new gold or iron-ore field. This country has been so long dependent upon Germany, the center of the potash industry, that if the investigations that are being made here and there to produce potash from feldspar should prove successful on a large scale, a new industry of vast importance to the agricultural world would have been created.

#### ARE YOU A LIVE MAN?

Mr. A. J. Gahagan, treasurer of the Loomis & Hart Manufacturing Co., Chattanooga, under date of September 20 writes:

"No real live man can question the value of the MANUFACTURERS RECORD as a prominent factor in Southern development especially. There is no one of the trade publications that quite covers so wide a field as does the MANUFACTURERS RECORD. Instead of representing a specialty it covers the entire range of Southern industries. Enclosed please find check for \$4, for which send the MANU-FACTURERS RECORD to Loomis & Hart Furniture Co., Chattanooga, Tenn. This is the new furniture manufacturing company that will succeed the Loomis & Hart Manufacturing Co., whose factory was burned in June.

Are you a "real live man?" If so, the MANUFACTURERS RECORD ought to prove as interesting to you as to Mr. Gahagan and his associates.

#### SCHOOL OF TROPICAL MEDICINE.

A movement undertaken within recent months to inaugurate a school of tropical medicine and hygiene in connection with the medical department of the Tulane University at New Orleans has received such a degree of universal approbation and financial support as to insure an early establishment of this school, and it is the expectation of the projectors that it will be found of such tremendous advantage that its growth and support by the public will be continuous and of ultimate large magnitude.

Dr. J. Burney Guthrie, who has been prominent in the work of rousing the interest of the public and medical world, has received a large number of letters from the highest medical authorities, both in this country and in Europe, men in private

fiedly endorsing the enterprise as one of the greatest possible advantage to not only the people of the United States, but all of those who will have business in in creasing size with the countries of the tropics following the completion of the Panama Canal.

It will be the purpose of the school of tropical medicine and hygiene to study tropical diseases, their origin, causes and prevention. In order to do this work, students will be educated with special reference to making personal investigation in the tropics after graduation. This will be the distinctive feature of the school, the object being to obtain a most accurate and valuable knowledge of tropical diseases, many of which are practically unknown to medical science today, and by the creation of a trained corps of specialists, a measure of protection against the introduction of tropical diseases into the civilized countries of the world may be secured to a degree not otherwise possible.

It is conceded by the medical fraternity that New Orleans is the ideal location for such a school, and the importance of having such an American institution is emphasized by the much closer relations which will be established shortly between all of the tropical countries and the United States.

The schools of tropical medicine in Eu ropean countries are especially gratified over the proposed establishment of such a school in New Orleans. It is the expectation that the school of tropical medicine, hygiene and preventive medicine my be inaugurated at the opening of the cole session of October, 1912, of the Tulane University.

#### MAKING \$500 OUT OF A \$4 IN-VESTMENT.

Mr. A. L. Gorley, sales agent, Savannah, Ga., believes that he is annually making \$500 on an investment of \$4. That is a pretty good rate of profit. The es about is explained in a letter from Mr. Gorley, who says, referring to his subscription to the MANUFACTUR-ERS RECORD:

"I do not want to miss a number. The MANUFACTURERS RECORD costs me the small sum of \$4 per year, and it has been worth at least \$500 a year to me, for it has kept me in touch with every metalceiling prospect in the Southern States."

There are thousands of other people in the South in various lines of busine could be equally as much profited by reading the MANUFACTURERS RECORD as has Mr. Gorley if they would follow the information it gives with the same activity and intelligence with which Mr. Gorley evidently follows it.

### INFORMATION ABOUT IRRIGATION DESIRED.

Information in regard to the irrigation of lands in the West and Southwest by means of electrical pumping plants is desired by Mr. Charles B. Eddy, 55 Liberty street, New York, who asks the MANU-FACTURERS RECORD for all available data on the subject. Mr. Eddy desires to know whether such plants have proved practical to the farmers and successful from financial as well as from an agricultural standpoint, and likewise desires the names and locations of some of these operations. Any of our readers who are personally acquainted with facts desired by Mr. Eddy would render him a favor by writing him fully on the subject.

#### Crescent Fertilizer Co.

The Crescent Fertilizer Co. of Sumter, S. C., has incorporated with a capital stock of \$100,000 and will erect a plant for the life and in Government positions, unquali- manufacture of fertilizers, ginning cotton, duced does not admit of debate. There is



GREATER SAVANNAH HOTEL AT SAVANNAH.

To be erected; 10 stories; 90x120 feet; fireproof construction; steam heat; two passenger and one freight electric elevators; cost \$334,800; architect, W.L. Stoddart, New York; contractor, Charles McCaul Company, Philadelphia,

etc. Among the incorporators of the company are Thomas Wilson, G. A. Lemmen, C. G. Rowland and W. B. Wilson, all of Sumter

#### PRESIDENT MABEN ON IRON.

# Views of President of Sloss Iron & Steel Co. on Iron Situation and Railrond Freight Rates.

[Special Cor. Manufacturers Record.]

Atlantic City, N. J., September 26. President Maben of the Sloss Iron & Steel Co. of Alabama, who is in Atlantic City, in discussing the iron situation and the question of a reduction of freight rates on iron while prices continue as low as at present, said to the MANUFACTUR-

"Regarding the iron market, there is but little to be said. It is surprising how the production has kept up, with the low prices prevailing, the curtailment of consumption and the large accumulation of stocks on furnace yards. The railroads are large consumers of iron, and there is no reason to believe that they will beco more liberal buyers until the mass of the voters, who control the politicians, can be brought to realize how closely their well-being and prosperity is allied to that of the railroads. This should be kept before the people for the good of the coun-The present price of pig-iron, when the lower grades are taken into account, is scraping on the rock-bottom of cost even at well-located furnaces, whereas it is below the cost at a great many fur-

"How long can these conditions continue?

"It would seem that many furnaces nust be driven out of blast, and in this sharp curtailment of production is to be found the only hope for an improvement in the price of iron in the near future. We cannot hope for any material incre in consumption until the nation drifts back to saner moorings.

"That the freight rates on Southern iron should, under existing conditions, be re-

not a consumptive demand in the South for the iron produced there, and the furnace companies must either pile the iron. still further sharply curtail production, or find a market in the North and East, This latter alternative is impossible with the present high existing freight rates, so that the furnace companies are suffering and the railroads are losing a profitable business which they might enjoy. When iren advanced the Southern railroads very promptly made two advances of 50 cents each in the freight rate, but now, with iron selling at about the lowest price in a number of years, and the South kept out of a large territory which it formerly enjoyed, by the excessive freight rates, when the railroads are asked to aid the furnace companies in enlarging their market and thereby benefiting themselves, by making a somewhat lower freight rate into a certain territory, they refuse to consider the request, giving as a reason simply that if the rate is reduced it will be impossible ever to advance it again, which is a very lame excuse, if any at all. The Southern roads should reduce the freight rates on iron, and that promptly, if they wish to foster and build up the iron trade in the South."

#### For Export Trade.

The program of the meeting this week at New York of the American Manufac turers' Export Association included addresses by A. H. Baldwin, chief of the bureau of manufactures in the Department of Commerce and Labor, on the work of tle bureau in the promotion of con by William H. Douglas, on the status of the commission-house in export trade; by Irving T. Bush, on terminal facilities and export manufacturers; by Leonard II. Jerome, on the drawback of duties; by Edward A. Keith, on credits in the Far East; by President W. B. Campbell and Charles D. Palmer, on banking facilities that will benefit export trade; by J. P. Santamarina, on the development of Argentine trade; by J. L. Ewell, on the merchant marine and floating exposition.

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# Governor Mann Will Lead.

DEMONSTRATION OF INTEREST IN PRACTICAL TRAIN-ING OF BOYS AND GIRLS.

By GOVERNOR WM. HODGES MANN of Virginia.

be held in Richmond, Va., in October next, from which we expect great things, it has been planned to have a parade which will illustrate two great industrial and social movements in Virginia.

A certain number of boys, representing the Boys' Corn Clubs of the State, all mounted, will escort a float upon which all appliances and other things necessary for the canning of fruits and vegetables will be placed. A certain number of girls belonging to the Domestic Science Clubs, with a teacher or director, will be actively engaged, while the parade is in motion, in preparing and canning all kinds of vegembles and fruits, thus showing to the people along the route their skill and effieency in this useful domestic work. The parade will start at the Capitol Square, be headed by the Governor of the State, and proceed through the principal streets of Richmond, escorted by the Boys' Brigade, to the Fair grounds.

While this parade will be an interesting feature of the Fair, it has far more in it than can be seen from the outside. The Boys' Corn Clubs have been organized in nection with the public schools throughout the State for the purpose of demonstrating the efficiency of inteligent, scientific methods of agriculture. It was found difficult to convince adult farmers that the practices employed by them and their fathers before them were faulty, wasteful and so unproductive as to call for different and better methods, and therefore it was almost impossible to persuade them to adopt the scientific agriculture, and even when their prejudices were so far overcome that they undertook to do so as an experiment, they would be so modified by previous practices as to fall short of mised results. But this was not the case with the boys, who, having obtained their fathers' consent to cultivate an acre in corn, went to work without prejudice and faithfully carried out instructions received from the Department of Agricul-

The results obtained have been so wonderful and the acres cultivated so widely scattered throughout the State that the adult farmers have waked up to the value of a method which has produced 167 7-9 shels of shelled corn on an acre of land that under the old way of cultivation would not have produced more than 15 or 20 bushels, and enthusiasm and hope have taken the place of the dull routine of the farmers' life, and Virginia finds itself in the midst of a forward movement in agriculture which we believe will put her abreast, if not ahead, of her sister States. Although the awakening of which I have spoken seems to have made itself felt more or less in every section of the country, we have found that where the lands are rich it is very much harder to introduce new methods.

Of course, when a boy or man has learned to produce the largest yield of corn on an acre, it is an easy matter to do the same with other crops, and four, five and even six tons of hay now delight the eye of the farmer on land which a few Jears ago would not produce a ton to the

There are some 2500 members of our Boys' Corn Clubs, and as they are offered prizes, and have to write out a correct history of fertilizers used, times and meth-

On one of the days of the State Fair to | hand in hand with agricultural progress,

The benefits likely to spring from the Domestic Science Clubs, while not so apparent, may prove of as great value in important directions as the Boys' Corn

Girls are taught how to plant, cultivate and care for the garden, what kind of vegetables and fruits to raise and how to can and preserve them. They are also taught how to cook, sew, clean up and make the house neat and attractive; in short, they are taught how to make a home the most comfortable, pleasant and de- perity, happiness and righteousness.

lightful place on earth, how to preside over it, and thus to attract, hold and influence for good their husbands, who must regard it as their haven of rest and source of inspiration.

In this work the homes of the pupils are visited, the mothers, wives and sisters become interested and sometimes enthusiastic, and so the fountains of civic life and civic virtue are touched, purified, beautified and made sources of good, uveful and happy influences.

These are some of the things which the parade of the Boys' Corn Clubs and Domestic Science Clubs will stand for and demonstrate, and because the children of the State are the hope of the State, the Governor of the State will show his interest and appreciation and testify his willingnes to lead the youth in paths which can only lead to progress, pros-

# Oklahoma's Water Supply.

By Dr. CHARLES N. GOULD, State Geologist.

is the most important problem confronting the people of Oklahoma today. The same statement applies with equal force to all of the States of the plains, including the two Dakotas, Montana, Wyoming, Colorado, Nebraska, Kansas and Texas.

The amount of rainfall on the plains gradually decreases from the Mississippi River to the Rocky Mountains. Eastern Missouri and practically all of Arkansas have an excess of 40 inches rainfall per annum; Eastern New Mexico and Colorado have but 10 to 15 inches per annum. Oklahoma, which lies midway between the mountains and the Mississippi, received from 15 inches in the western part to 45 inches in the southeastern corner. The rainfall in the eastern half of Oklahoma is practically the same as that of Kentucky, Ohio and Illinois, an amount amplfor all purposes. The western part of the State, however, received on an average only about half the amount of precipitation that falls in the eastern counties.

There is no more fertile area in the Union than that occupied by the State of Oklahoma. The soil is capable of pro ducing a large variety of crops, and the warm climate renders the maturing of these crops almost an absolute certainty. If Western Oklahoma possessed an ade quate water supply the great problem of the future development of that part of the State would be permanently solved.

There is enough water in Western Oklahoma for the present population; there is water enough for twice and perhaps three times the present population, but as the population increases, as it must inevitably increase, it will eventually be found that the water supply is not adequate for the demand as made upon it.

The sources of water supply for West-ern Oklahoma are threefold, viz., precipitation, streams and wells and springs.

It has already been stated that the rainfall in this region averages from 15 to 30 inches per year. This amount, which often falls as a few violent showers, is not sufficient to mature a large variety of crops. Corn, for instance, requires 30 to 40 inches of rainfall per year. Cotton and wheat, nearly as much. Such crops as Kaffir corn, broom corn and mile maize thrive in Western Oklahoma, but, unfortunately, many farmers persistently refuse to raise these crops.

All the streams in Western Oklahoma flow down the plains; that is, they follow the general slope of the country from the mountains to the Mississippi, this slope being approximately eight feet to the mile, ods of cultivation, mental training keeps Beginning at the north, the largest rivers

The matter of an adequate water supply | are Salt Fork of the Arkansas, Cimarron, North Carolina, South Carolina, Washita and Red rivers. With the exception of the Washita, which is more like an Eastern stream, these rivers are typical streams of the plains; that is, they have low, sandy banks, with little or no timber, and broad, shallow, sand-choked channels. During a good part of the year these streams contain little or no water, but at at irregular intervals, without warning, great volumes of water, sometimes many feet high, rush down the channel, carrying everything with it. The stream will be bankful for several days, or even weeks, when the water will recede and the channel will again be practically dry, possibly for months. The origin of these infrequent rises is probably due to violent rains near the heads of the streams.

Entering the larger streams there are number of small tributary creeks, few of which are more than 20 miles in length. Many of these creeks are perennial, being spring-fed, and carry water throughout the greater part of the course throughout the year; others are usually dry except after heavy rains.

Western Oklahoma contains many The water from the springs in the Redbeds region, which occupies many of the counties, is often impregnated with gypsum and other soluble salts, rendering it often unfit for domestic use. The springs in the Sandhills regions, which lie along many of the larger streams, furnish a large supply of pure water. The water from a number of these springs often unite in supplying the small creeks which enter into the larger rivers.

There is scarcely a locality in Western Oklahoma in which good well water may not be found. As in the case of springs, the wells in the Redbeds often encounter gypsum water. Those in the Sandbills and on the high plains usually furnish inexhaustible supplies of pure, soft water.

It will be readily understood that with an inadequate supply of rainfall and relatively few perennial streams the water problem in Western Oklahoma is a serious one. Irrigation has been attempted on a small scale in a number of instances. Government surveys have been made in several localities in Western Oklahoma by the United States Reclamation Service, but so far no large projects have been installed or are any being attempted at the present time. Several private projects are now being projected.

The popular fallacy of change of climate incident upon the settling up of a new country, once so common in Okia- Van Duzen of Minnesota, and others.

homa, has been practically exploded. This idea, always prevalent on the plains, has been used as an inducement for the various real estate booms in every State from the Rio Grande to the Canadian line. People are beginning to learn, however, that climate is a stable thing which does not change within the memory of a single individual.

To my mind the solution of the problem is threefold-first, the installation of as many modern irrigation plants as possible. carrying water from the streams and springs; second, in the construction of numerous earthen dams to impound storm waters, and third, and most important of all, the cultivation of such crops as are suitable for the Western country. The older farmers are often loath to change their methods of cropping. Many men who have come to the plains country from such States as Tennessee and Ohio have lost their all because of their misunderstanding of climatic conditions. It is gradually being borne in upon them, however, that the crops and methods employed in the Eastern States will not necessarily be successful on the plains.

Each year more and more crops suited to the climate are being grown. Kaffir corn and milo maize are replacing corn and cotton, and broom corn is being raised instead of wheat. Many farmers in this region raise more bushels of grain per acre from these crops than do the farmers in the Eastern States. Dry farming is being practiced and people are rapidly learning how to farm the plains country.

As stated above, the soil is extremely fertile, and capable of producing large If the water supply is conserved and intelligent methods of farming employed this region will support a greater population per square mile than such States as Virginia and Tennessee. Not until the population has reached four or even five times its present density need any alarm be felt regarding excess of population.

#### Use of Oil on Railroads.

An interesting feature shown in the re port on petroleum for 1910 by the United States Geological Survey, now in preparation, is the statement of the extent to which oil enters into railroad transportation. The total length of railroad line operated by the use of fuel oil in 1910 was 21,075 miles, a trackage equivalent to that of practically five transcontinental lines stretching across the United States from ocean to ocean. Some of the lines that use oil, however, also use coal. The number of barrels of fuel oil-of 42 gallons eachconsumed by the railroads of the country in 1910 is stated to have been 24,526,883. This includes 768,762 barrels used by the railroads as fuel otherwise than in loco-motives. The total number of miles run by oil-burning engines in 1910 was 88,-318,947. This would have carried one engine or train around the world approximately 3530 times.

#### National Nut Growers.

At the tenth annual convention at Mooile, Ala., October 5-7, of the National Nut Growers' Association, women's work in the industry will be discussed by Mrs. Thomas H. Banning of Chicago, Mrs. Elizabeth H. Sullivan of Mobile and Mrs. Wm. H. Hutt of Raleigh N. C. President Miller will review the developments of the past 10 years, and addresses will be made by Prof. E. J. Kyle of Texas, Eugene Merritt of Washington, D. C.; Dr. W. C. Benning of New York, W. W. Carroll of Florida, William P. Bullard of Georgia, W. C. Jones of Georgia, Dr. Charles A.

# Holland: Exemplar for Louisiana.

DRAINAGE POTENTIALITIES OF THE PELICAN STATE.

[Special Correspondence Manufacturers Record.]

New Orleans, La., September 23, "Holland is a great country," said Mr. Edward Wisner, the millionaire pioneer in Louisiana reclamation work, just returned from a trip abroad, "but it isn't anything like as great in natural riches as Louisiana. When this lower coast country, sometimes called the Holland of America, has been developed to the same extent as Holland is today we will have the richest, most prosperous agricultural section on the globe.

"Although in canals, levees and dykes and the necessity for pumping off water there is a similarity in conditions and methods, yet in character of soil it seemed to me in going through the country that the fens of England which are drained or reclaimed lands are more like our Louisiana lands than are the lands of Holland.

"In Holland there are vast areas of clay lands, wholly unfitted for anything but pasturage, and which have probably never had a plow in them. I should say the greater part of the country is of such a character. It is land which has been reclaimed from the sea by the construction of enormous dykes. In some places the surface of the water is 20 feet above the level of the land. But the Hollanders make the most of everything. The grass lands are covered with dairy herds. cattle are of fine breeds, kept in good condition, and dairying is quite profitable. Cheese-making is a well-developed industry, the high-priced Edam and pineapple cheeses being a Holland specialty. cheese factories are numerous, usually not large, but equipped with the best and st modern machinery. This fact, by the way, applies to all other operations there. The old Dutch windmill is present, to be sure, but its usefulness is largely a tradition. The real work of pumping is done by machines of the most modern type.

"I saw no such soil in Holland as that of the alluvial lands of Louisiana, although I saw lands held at from \$500 to \$1000 per acre or more. Intensive cultivation is the rule, and there is utilization of every kind of soil in accordance with ascertained knowledge as to what it may be best adapted to. I'd hate to say what Louisiana lands will be worth when the same methods of cultivation are employed down here.

"There is a very general utilization of the canals of Holland for transporting produce, but passenger conveyance is mostly by rail, tram and vehicle. There are good roads, as a rule, many built along the levees and dykes. They are mostly paved roads, the native earth materials being no better for good roads construction than are ours in lower Louisiana."

Asked if Hollanders are considering Louisiana as a desirable place to come to, Mr. Wisner replied:

"I don't suppose many people in Holland among the farming or what might be termed the peasant class ever heard of Louisiana. I spent five days in Holland, and very few of those I talked with had any knowledge of Louisiana and the possibilities here.

"I believe it would be possible to arouse a great interest in Louisiana among those people, nevertheless; but it would have to spend a considerable length of time among them, speaking their language and demonstrating their entire responsibility and credibility. In that way an interest could be worked up that would result in an emigration movemen of some magnitude. The density of the population puts a tremendous pressure on those who work for a living and if conditions here were understood I have no doubt we would see a well-defined, continued move ment of Hollanders to Louisiana lands. And what a Paradise their thrift and industry would create here!"

ALBERT PHENIS.

#### AUSTIN'S GREAT DAM.

Power to Be Added to the Equipment Texas' Capital City

[Special Cor. Manufacturers Record.] Austin, Tex., September 23.

The mammoth dam and power plant at Austin, the franchise and contract for which were recently executed by the city to Wm. D. Johnson of Hartford, Conn., and New York city, is a world-known project, and includes the application of the modern principle of construction known as the "hollow dam," built of steel reinforced concrete. The dam will be built on the location of the old granite-faced cyclopean masonry dam, which failed in A part of the old dam properly reinforced will be used, the foundation will be made safe and the toe will be carried to a lower level.

The new portion of the dam will be built according to patented design of reinforced concrete buttress walls, built at angle to the line of the dam. These walls will cross, forming diamond-shaped cells, and will provide a horizontally-braced supporting structure to support the deck of the dam, which will be of reinforced concrete, sloping upstream and downstream, built down to impervious and olid foundation at the toes.

The new section of the dam will be nine feet lower than the old section, and both sections will be provided with automatic flood gates 14 feet high on the new and 5 feet high on the old section. These gates are arranged so that the flood waters will be passed over the dam, and at the same time will hold the waters in the lake at nearly regular level, conserving the water in dry periods, and passing flood waters without materially raising the level of the lake. Sluice gates are also provided of steel and bronze at low-water levels to empty the lake or to wash out silt.

The power will be generated in a brick and steel power-house at the site of the dam. Three 2400-horse-power turbines will develop power for three vertical direct-connected alternating-current generators guaranteed to develop 6000 horseower net. The current will be transmitted to the city's power-house by two three-phase lines of aluminum cables, suported by heavy Michigan cedar poles, The current will be brought to the city's power-house at 6600 volts, and there transformed to the regular voltage of 2300 now used by the city for district distribution.

The contract includes the installation of two 6,000,000-gallon (daily capacity) electric pumps to be connected to the city's present excellent filter system, and the water will be pumped into a 10,000,000would require a campaign of education. Some well accredited representatives to be built by the contractor.

The whole project has been under preparation for many months, and the accuracy and correctness of design and arrangement is well attested by the fact that Mr. Lamar Lyndon, an authority on hydro-electric engineering, has been the consulting engineer, and Mr. Lyndon, assisted by Frank S. Taylor, engineer at Austin, have been retained for the engineering of the project for the contractor,

Austin is the seat of the State government. It is becoming important as a business center, and is particularly notable for its beautiful homes and cultured people. It is the home of the State University and other prominent colleges and schools. The business interests of the city are many, and it is becoming the distributing point for commerce within a radius of 100 miles. The railroad facilities are good, and afford the city access to and from all parts of the State. The Government census reports the city as having a population of 30,000, and the city directory 36,000.

Travis county is somewhat heavily timbered, but of recent years a great deal of the land has been cleared and put into cultivation. The hills are still covered with dense growth of cedar and oak, and along the river is found an abundance of timber. The farms are rich and productive, mainly growing cotton, corn, wheat, oats, barley, rye, alfalfa, sorghum and sugar-cane Irish and sweet potatoes are a profitable erop, and all kinds of vegetables and fruits, such as peaches, plums, grapes and figs, grow in abundance. The average rainfall for a period of over 50 years has been 35 inches in this section of the country, which insures good crop conditions, although a number of farms, both large and small, are being irrigated from the vaters of the Colorado.

Austin has grown in population in the last eight years, and since 1900 from 22,000 to 36,000, and the commercial growth of the city has kept pace with the growth of the educational institution and its population. The city tax rate is \$1.591/a, and compares favorably with that of other Texas cities, while the county rate is from 11 to 12 cents on \$100, and less than most of the other counties in the State. The non-taxable property, such as schools, churches and public buildings, exceeds in value that of all taxable property more than \$1,000,000. The commission form of government was inaugurated in Austin in April, 1909, and in the way of municipal works of all sorts and private enterprises, in large part incident to municipal order and stability here, more was done or rather begun in the way of public improvement in Austin in the last two years than in any preceding 10 years in the history of the city. This refers largely to street and sidewalks begun and projected, parks and a public library projected, and a contract to rebuild the dam at a cost to the city of nearly \$2,000,000. Among the financial achievements of the city during the two years referred to are these: Municipal ments were increased \$5,019,357, and the municipal tax rate was reduced 24 cents on the \$100. The city redeemed \$29,000 of municipal bonds and paid over drafts, partly inherited and partly the result of confusion in a part of the first year of the commission's authority, growing out of the fact that there had been no budget made by the previous administration for that year, in the amount of \$31,-529.31. The city closed the year 1910 with a cash balance of \$93,432.57, and had absolutely no floating debt whatsoever. In fact, in the year 1910 the city paid 13 months' bills in 12 months' time, something which has never before been undertaken in the history of this city.

The toal length of the new Austin bridge from one end of the handrail to the other is 9581/2 feet. There are eight arches, each 110 feet and 9 inches in the clear. The spring of the arches is 191/2 feet, and the thickness of the arch ring at the piers is 5 feet, and at the crown 2 feet 9 inches Each arch is reinforced with 70 1/4-inch steel rods, which run through the arch piers and are bolted together. Each arch is 30 feet wide and contains 511.85 cubic yards of concrete. The bridge is so built that the concrete carries crushing and shearing stresses only; tensile stresses are carried by the steel reinforcing. It will carry safely a load equal to two interurban cars weighing 200,000 pounds to each arch, or 80 tons for the whole bridge To state it another way, the roadway will carry 159 pounds to every square foot of surface and the sidewalks 133 pounds per square foot. There has been used in the bridge over 16,000 cubic vards of e equal to 112 carloads, and about 1,300,000 pounds of steel for reinforcing car tracks, etc. The clear width of the bridge he tween the handrails is 48 feet and between curbs 38 feet. A double track for street cars is imbedded in the cement of the roadway, and is said to be the finest bed of tracking in the State. The total cost of the bridge is \$210,000.

The Austin Business League, with Mr. Will C. Vining as secretary, was largely instrumental in carrying the election for the bond issue of \$500,000 for the construction of the Colorado River bridge, and secured \$360,000 appropriation for State institution and \$30,000 toward the erection of the new Y. M. C. A. building. The League is working in the direction of securing for Austin a \$500,000 up-to-date modernly equipped and appointed hotel, and it seems likely that its present undertaking will be carried through successfully. CHARLES E. TRIMBLE.

#### The Situation in Birmingham.

[Special Cor. Manufacturers Record.] Birmingham, Ala., September 26.

The week opened with but few inquiries ending in the local pig-iron market, and of those inquiries pending only a small proportion involved other than carload lots for prompt shipment. A round lot of charcoal iron submitted during the past week has not been placed, but coke-iron melters manifest little interest in large tonnages either for delivery during the remainder of this year or during the early part of next.

The aggregate of recent sales is not attractive when compared with the aggregate production even at the present low rate. However, one large interest now reports having sold some 15,000 tons dur ing the past fortnight, all of which is for shipment within this year, and, when taken with the tonnage sold previous to that time, very nearly represents the probable make of that particular concern during the remainder of this year. There has been no further shading of prices than was reported early in last week. The majority of producers are willing to accept \$10.25 per ton Birmingham for No. 2 foundry only where prompt shipment can be made, but there is sufficient tonnage available for delivery over the remainder of the year at the figures named to meet the demand, and the market for that de livery is quotable at such figures. One of the large producers still adheres to a basis of \$11 per ton Birmingham for any delivery within this year, and does not quote for shipment after January 1, notwithstanding the fact that such figures are considered prohibitive. Of the sales reported during the past week a lot of 450 tons of special analysis iron for c paratively early shipment brought \$11.50 year w and No \$10.50 sales I highest helieved ion at and the Coke ing sch ham fu to \$11 No. 3 foundry to \$9.5 Stan able at at furr

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per ton at furnace; an aggregate of 1000 as for delivery over the remainder of the rear was sold at \$10.50 per ton for No. 2 foundry, and a smaller lot of gray forge and No. 4 foundry was sold at a basis of \$10.50 per ton for No. 2 foundry. The sales mentioned probably represent the highest prices received, although it is not believed that a lower basis than \$10.25 per on at Birmingham was made in any case, and that only for Nos. 1, 2 and 3 foundry. Coke iron is quoted as per the following schedule for gross tons at Birming ham furnaces, viz.: No. 1 foundry, \$10.75 10 \$11; No. 2 foundry, \$10.25 to \$10.50; No. 3 foundry, \$9.75 to \$10; No. 4 foundry, \$9.50 to \$9.75; gray forge, \$9.25 te \$9.50.

Standard warm-blast charcoal is quotable at from \$22 to \$22.50 per gross ton at furnaces, and standard basic iron is quoted at prices about in line with those asked for No. 2 foundry iron at Birmingham.

In view of the decline in price for finished iron and steel products, lower prices for old material are generally expected, and as a result the buying has been checked to some extent. There is no disposition, however, on the part of dealem to dispose of stocks at sacrifice prices. The trading during the past week involved principally wrought and steel grades without moving a large tonnage of either grade mentioned. Receipts at dealers' yards have been light for some time now, and as the condition of the market is considered more unsettled it is not believed that stocks will be allowed to increase. Dealers' asking prices are as follows per gross ton f. o. b. cars here:

Old iron axles, standard, \$15.50 to \$16. Old iron axles, small, \$12 to \$13.50.

Old steel axles, light, \$13 to \$13.50.

Old steel axles, standard, \$14 to \$14.50. Old iron rails, \$13 to \$14. No. 1 railroad wrought, \$11.50 to \$12.

No. 2 railroad wrought, \$8 to \$8.50.

No. 1 country, \$7 to \$7.50.

No. 2 country, \$6.50 to \$7.

No. 1 machinery, \$8.50 to \$9. No. 1 steel, \$9 to \$9.50.

Standard car wheels, \$11 to \$11.50.

Tram car wheels, \$8 to \$8.50. Light cast and stove plate, \$7 to \$7.50.

Local cast-iron pipe manufacturers are now considering specifications for the requirement at Kansas City, Mo., which will involve some 2500 to 3000 tons of class "B" pipe for prompt delivery. Shipment against contracts for the week are reported as fairly satisfactory, with the gregating an attractive tonnage. largest contracts now in sight is the Kansas City requirement mentioned above and the requirement for one of the Pacific Coast cities. This last will probably not ne up for some 30 days.

Class "B," or water pipe, is quoted as follows per net ton f. o. b. cars here: Four-inch to six-inch, \$23; 8-inch to 12inch, \$22; over 12-inch, average \$21, with \$1 per ton extra for class "A," or gas pipe. These prices are very firm for small orders, but are shaded for large municipal ontracts, especially where the requirement of any one size is particularly large.

There has been a decided improvement in the demand for steam coal, and foundry coke is moving at a satisfactory rate against contracts entered during July and August last. The increased demand for coal is accounted for to a certain extent by the large cotton crop throughout the South, which has resulted in more extensive operations at cotton gins and cotton compresses. It is noted that operations on all of the best seams have been exan advance of 15 cents to 25 cents per ton has been received for the most favorite brands. The price for 72-hour foundry coke has not changed, and furnace coke, notwithstanding the light demand comparatively, is not available at unusually low figures.

During the past week the construction of the electric railway between Bessemer, Ala., and Ensley, Ala., was completed to such an extent as to necessitate the purchase of steel rails, and the initial order for 3500 tons was placed with the Tennessee Coal, Iron & Railroad Co. to be furnished from the Ensley (Ala.) mill. The rails purchased are of standard weight and will be delivered promptly. It is now thought that a part of the line referred to will be ready for operation within six months, although it will probably require one year for the completion of the original plan.

The contract for the new American Trust and Savings Bank building, to be constructed of steel and reinforced concrete, has been awarded to the Jones Construction Co. of Dallas, Tex. It has just been decided to increase the height of this building to 20 stories, and the work of constructing will be completed as rapidly as is possible.

The State Line Oil Co., with Culpeper Exum of Birmingham as president, has just been incorporated to develop certain oil fields near Jackson, Miss. No announcement is yet made as to the extent of the proposed development, but several drills are now being operated in the territory mentioned.

#### PROGRESSIVE ABILENE.

The Attractions of the Central West Texan City.

[Special Cor. Manufacturers Record.] Abilene, Tex., September 12.

The Abilene country is known far and wide, but only vaguely as to its limits and distinctive characteristics. The Abilene country derived its name from the city of Abilene, which was established March 15, 1881. It comprises a territory of 3000 square miles, from which vast scope of country the inhabitants came to Abilene to sell and buy. Abilene began with a population of 1000, many of whom dwelt in tents for weeks until lumber could be secured to build houses. It was from the beginning the center of trade for the whole of Western Texas and the Mecca of the Texas cattle kings. Its citizenship was enterprising and determined. It became early the county-seat of Taylor county. For years the cattle industry predominated, but with the ever-increasing influx of the adventurous and sturdy farmer the "range" has gradually given place to agriculture. Abilene remained, as it still does, the center of business for a vast area. The diversification of industry added greatly to the attractiveness of the country, and many hundreds of new settlers found homes in the city and within the borders of Taylor county.

In the course of time men of keen business ability and large capital invested their money and brains at Abilene. The establishment of inland country towns created a new demand; the wholesaler invaded the field. From this time forth Abilene has grown from a town of 3000 to 12,500 people.

The various industries and large mercant'le concerns have placed Abilene upon a firm and positive basis. Among these are three wholesale grocery and produce businesses of more than \$750,000 capital; wholesale hardware of \$175,000; ice and electric-light plant of \$200,000 capital; cotton-oil mill and factory for refining cot000; a modernly-equipped gas plant with a capitalization of \$100,000, and in addition other industries of various kinds; broom factory: mattress factory: oil-can factory; machine and implement factory; manufacturer of products of crude oil; two planing mills; five wholesale and retail lumber yards.

There is within six or seven miles of this city a mountain range almost wholly of the limestone rock, which actually shows approximately 90 per cent. pure

The importance of Abilene as a distribution center is due to its easy ingress and egress over three important lines of railway-the Texas & Pacific, which traverses the entire State from east to west and having direct connection at Fort Worth and Dallas with all main line sys: tems of railway or State and interstate transportation; the Abilene & Northern Railway, which is the main connecting branch of the Burlington system, giving direct connection with Oklahoma, Kansas City, Denver, Col., and St. Louis; the Abilene Southern Railway, which gives direct connection to Gulf points, especially Galveston, by connection with the transcontinental line of the Santa Fe Railway.

In its growth the city of Abilene has not been unmindful of its public utilities. Its people enjoy the service of a street railway system; one of the most modern street lighting systems in the State, which has 65 decorative electric-light poles in the business area; its resident section is illuminated with hundreds of gas street lights. The city is supplied with pure and wholesome water from a lake covering 300 acres. This supply is entirely sufficient for all ordinary purposes and for the present for manufacturing and industrial concerns. Abilene, in view of the prospective growth, has just issued bonds for the purpose of an additional site of over 400 acres for a new lake. It is expected that there will be issued in the immediate future additional bonds for the purpose of improving this new water site, enabling thereby the city to be furnished a sufficient supply of water to take care of every and all industrial concerns that may come to the city in the next 10 years. Within the last few months the Board of Comnissioners and citizens have expended \$150,-000 on street improvement, furnishing bitulithic pavement over the entire business section. It has now under contemplation the macadamizing of numerous resident streets. In connection with this improvement the two telephone companies have worked in harmony and have made this city one of the first of those of its size in the State to place the telephone cables under ground. Abilene has also during the last few months provided itself with a sewerage and drainage system entirely adequate for its present and growing popu-

Abilene adopted, through a special enactment of the last Legislature, the commission form of government, with a mayor and four commissioners elected by the city at large. All other officers are appointive by the commission, except public school trustees. The assessed valuation of the city is \$5,500,000, with a maximum rate of \$1.60 on the \$100. This does not include two suburban portions of the city which have been added since the tax roll was made up. This additional valuation will make the total over \$6,500,000.

The Federal Government has established at this place two large and beautiful buildings, the courthouse and postoffice, costing \$100,000, and the Weather Bureau building, costing \$20,000. The character of tended to a more or less extent and that tonseed oil of \$150,000 capital; compress large amounts of money in churches and county a network of first-class highways. It possesses one of the most com- These roads are of two classes, a strictly

lete public school systems in the State. Its public school buildings, four in num ber, cost approximately \$125,000. It also has established through the assistance of Andrew Carnegie a public library valued at \$20,000. It has just recently established a kindergarten school through the assistance of the public kindergarten association. It has under the auspices of the West Texas Baptist Association a collegiate institution known as Simmons This institution has an enroll-College. ment of 380 students, with grounds and buildings valued at \$250,000. The citizens of Abilene are now raising \$40,000 for an additional administration building. The Church of Christ has also located here a Christian collegiate training school, with enrollment of 150 students, and grounds and buildings valued at \$150,000. There is now under course of construction the Abilene Training School for Young Men, the funds and grounds for which building were recently given by the citizens. The value of this institution is \$15,000. During the last 18 months Abilene has expended in new city churches \$125,000.

Located as it is in an open territory and at an elevation of 1750 feet, Abilene enjoys a wholesome and healthful climate. At no time in its history has there been a scourge or epidemic. Its people are robust and energetic, thriving and prosperous. The temperature in this section is moderate, neither extremely hot for any ength of time nor extremely cold.

The natural surroundings that have made it possible for Abilene to become a growing city have been the vast areas of tillable lands surrounding it. Taylor county comprises 900 square miles, with an area of approximately 600,000 acres, of which over 450,000 are tillable, and at present approximately 300,000 in actual cultivation. The population of this county in 1890 was approximately 5000; in 1900, 10,495; in 1910, 26,293. The surface of the land is rolling and broken by a range of mountains running southeast and northwest. It has running through it numerous streams, which are in a large measure supplied with springs giving generally a sufficient supply of water. The soils of the county range from a black hog wallow character to a red sandy loam; these lands are easily tilled and very productive. Diversified farming, together with fine stock raising, has displaced the large ranches. The staple products are grown with considerable profit, consisting of cotton, which yields on the average on one-fifth bale to the acre, with an average total product for the county of 35,000 bales; kaffir corn and milo maize, which are the chief forage products aside from the hay industry; wheat and oats, which are grown extensively, yielding on the average repectively 15 and 35 bushels per acre. The soil is also specially adapted to truck farming and horticultural products. Truck farms readily yield handsome incomes per acre, while apples, peaches, pears, grapes and citrus fruits are grown with profit. The class of farmers to be found in this county is considerably above the average, which is due to the fact that the large landowner is somewhat careful in the choice of tillers of the soil.

Taylor county has taken up the goodroads problem. Road district No. 1 voted a \$150,000 bond issue for macadam and gravel roads. Twenty-five miles have already been constructed, and a like number of miles remain to be constructed. These roads are being constructed out from Abilene in various directions to the limits of the district, and a strong sentiment has developed in the adjoining districts to connect with the roads already Abilene is marked by the expenditure of built, which, when done, will give Taylor large amounts of money in churches and county a network of first-class highways.

all rock, or what is known as a macadam road, and a gravel road. The system employed in the construction of these roads is highly recommended and encouraged by the good-roads department of the Federal Government, a representative of this department being present and assisting in the initial work. The work was begun in a practical businesslike way, a complete equipment of machinery and tools was first installed, the roads were surveyed and widened to 50 and 60 feet, straightened, cross-sectioned, drainage levels established, place for culverts located, all turns made on a curve instead of an angle, and the road then graded in conformity with the above conditions. The width of both macadam and gravel roads is 16 feet, with an eight-foot dirt passway on either side, with a gradual slope in keeping with the slope given the rock or gravel leading to the drainage ditch on either side. All depressions are filled and hills cut down. the grade being reduced to a minimum, only in two instances exceeding 3 per cent. Special stress was laid to cutting down the grades and preparing a firm and broad foundation. All culverts are made of concrete, and in size in keeping with the drainage area.

All bridges on these roads are constructed of concrete and steel, with sufficient strength to carry over the largest size rollers and engines. The cost of constructing the macadam road runs from \$2000 to \$4000 per mile, dependent upon the length of haul of material,

In constructing the gravel road the ame care and caution is used in select ing the material that is used in selecting rock: that gravel with a small pebble and a good quality of live clay intermixed is ed. Gravel pits are opened along the route of the road or as near adjacent thereto as suitable material can be found and hauled from the pit and placed in the channel. The eight-foot dirt driveway on both sides of the road is found very useful and practical. The cost of constructing the gravel road is from \$1200 to \$2200 per mile, dependent upon the length of haul of the material. The roads being constructed are being made as permanent s possible, with the view to keeping down the maintenance expense, as well as to give service, and the citizenship generally is proud of the work thus far done, and feel that they have as good roads as can be found in the State.

The total rendition of property in Taylor county is \$14,000,000. The county tax rate is 33 cents on \$100, all scrip at par, outstanding; county bonds \$6000, and these have been ordered retired. A new and up-to-date courthouse in keeping with the growth and development of the county is contemplated. The county is in first-class condition.

CHARLES E. TRIMBLE.

#### APPLES AND LIVE-STOCK.

#### Plans of a Company for the Carolina Highlands.

Mr. J. C. Tebbetts, Asheville, N. C. secretary and treasurer of the North Carolina Apple & Live-Stock Co., writing to the MANUFACTURERS RECORD of the plans of the company, says:

"The capital stock is \$125,000, full paid and non-assessable. A. W. Faulkner of this city is president, and the writer secre tary and treasurer. The land we have selected is in Surrey county, North Carolina, five to seven miles from Mt. Airy, which is the terminus of a branch of the Southern Railway.

"There are approximately 2000 acres in the tract. The elevation varies from 1250 to 2000 feet, and J. B. Sparger, man ager of the Sparger Orchard Co.'s orchard, who has selected the land for our enter- Louisiana and Texas that connect with her to become.

prise, stated that a large portion of it is above the frost line, insuring uniform crops.

"The apple orchard will be set in marketable winter varieties. With a view to creating a more immediate revenue, a large peach orchard will be set and intercrops will be produced, which should make the enterprise self-supporting the third year. The nursery department will pay by the third year.

"Poultry and bees will be added at once; also 10 brood mares of the Percheron breed and stallion of the same breed. The mares can be worked in clearing and tilling the land. Other live-stock will be added when our crops will justify it.

"Realizing the great possibilities in cientific borticulture and animal husbandry, we have entered upon this ven ture with the hearty co-operation of the department of agriculture in Raleigh.

"One feature is the farmhouse or club house for the entertainment of the stock holders and their families during the summer season, and splendid bird hunting can be found throughout the mountains.

#### INTERSTATE INLAND WATERWAY

#### Louisianans and Texans Pushing the Great Improvement.

[Special Cor. Manufacturers Record.]

Morgan City, La., September 22. Hundreds of delegates and officials from Louisiana and Texas and representatives of national organizations from elsewhere are counted on to attend the seventh annual convention of the Interstate Inland Waterway League of Louisiana and Texas, which meets here October 5, 6 and An elaborate program of entertainment, speechmaking and sightseeing has been arranged for, and a meeting of unusual interest and importance is counted The Governors of Louisiana and Texas are to be present and deliver addresses, as will also a number of Senators and Congressmen from the two States, The talks will all be along practical de velopment lines, party and personal politics being tabooed.

The object of these conventions is to arouse and maintain public interest in the project of constructing an elaborate sysem of inland waterways throughout th country. The league to meet here next week confines its efforts to that portion of the work between New Orleans and the Rio Grande in Texas. The work of the convention is to demonstrate the great possibilities for increased development in farming operations, industries and town and city growth when the waterway com munication shall have been perfected throughout the Gulf coast country. By this means the people of the section and State are aroused to the importance of pushing through the work, and as the Government only undertakes expenditures on work that is urgently demanded by the people, the activities of the league are of primary and indispensable importance In the years since organized effort has been in effect such great progress has been made that the entire system of inland waterway communication between New Orleans and Rio Grande City is practically assured. Portions of the work have been completed, and what now remains to be done is the joining up of these links and the deepening and widening of channels of tributary rivers, bayous and bays

A very large part of this work has been approved by the Government, and more than \$1,000,000 has been appropriated for the work done and that approved. The plans of the league aim at not only a continuous canal between the Mississippi and the Rio Grande, but the improvement of all the important rivers and bayous in

the main canal. This also includes a second and more direct route between New Orleans and Morgan City via Houma, in addition to the waterway between New Orleans and Morgan City via the Plaque mine locks, already in operation, the work of the league will not be finished until the first canals are gradually deep ened and widened, so that boats of heavier draft may be substituted for the earlier vessels, the development of the traffic thus going hand in hand with the growth of transportation facilities.

Morgan City is the center of a great sugar-making section. Around here are also the mills of the largest cypress manufacturers. Here is a great fish and oyster market, and the tonnage of the water route will include shipments of all the various products of the section, and there will be brought in as return cargoes the groceries, provisions and other commodities required for consumption by the citizens of the section.

With the drainage of large areas of wet lands, now being undertaken in a number of places in lower Louisiana, there will be great further development of water transportation, by means of motor boats and small craft, that will give to the whole section in course of time convenient cheap and expeditious transportation facilities hardly to be surpassed. The extent of the benefit such transportation facilities, added to those already afforded by the main line of the Southern Pacific and its local branches, can with difficulty be even approximately imagined.

Incidental to the convention there will be a celebration of the completion of the Atchafalaya Bay ship channel, which has nade of Morgan City a deep-water port, the only deep-water port between New Orleans and Port Arthur. The channel extends from Berwick Bay, with its 160 feet of water, to the deep waters of the Gulf. It has a channel 200 feet wide, 20 feet deep and 15 miles long. It was the result of the very enterprising business men, mill men and planters of this s tion, who joined with the parish of St. Mary's in subscribing \$200,000 for the So efficiently and economically was the work done, under the plans and direction of Engineer Warren B. Reed. and so immediate and extensive was the response made by shippers in increased commerce that the United States Govern ment accepted the work and agreed to deepen, widen and extend the channel and to take charge of the maintenance, return ing to the original subscribers about 90 per cent, of their subscriptions, the balance eing expended in maintenance up to the time the Government takes complete control.

The convention committees have arranged for a flotilla of water craft during the convention. An inspection of the ship channel will be made, and there will also be a trip up the Teche-always referred to as "the beautiful Teche," and also known as the Evangeline country. Here the flavor of plantation life in Louisiana is found in perfection, for there is no more beautiful, fertile or typically Louisianan sections in the State.

Opportunity will also be given the delegates to inspect reclamation work on a large scale, the Avoca drainage district of nearly 16,000 acres, all in one unit, being within a few miles of Morgan City.

Besides the general work in behalf of the comprehensive waterway plan, Morgan City will present in an unofficial and incidental manner the basis of her belief that with the development of the country and the extension of transportation facilities the section will have need of such an important port and commercial center as Morgan City's location and facilities fit ALBERT PHENIS.

#### STEAMERS VIA PANAMA.

### Atlantic & Pacific Transport Co. De. scribes Its Plans for Business,

The Atlantic & Pacific Transport Ca. Calvert Building, Baltimore, of which B N. Baker is president, has issued a prespectus describing its plans to establish line of steamers from New York, stopping at Charleston or Savannah or at both cities (and also a line from New Orleans through the Panama Canal to San Diego. San Pedro (Los Angeles), San Francisco Astoria (Portland, Ore.) and Seattle an The capital stock authoried is return. \$15,000,000 of a par value of \$100 There are no bonds and no preferred stock, and it is further stated that then are no syndicate or promotion profits is the plan.

Mr. Baker, who heads this new enter prise, is a Baltimorean and was formerly president of the Atlantic Transport Co. which he and his associates built up from a small beginning to be one of the most uccessful steamship lines crossing the Atlantic. Associated with him in this new enterprise are three of the gentle men who were with him in the manage ment of the Atlantic Transport Co., which, it will be remembered, was par chased by the International Mercantile Marine. Adrian H. Boole, who has had an experience of 25 years in the trans atlantic steamship business, is also with the company.

It is stated that these steamers vis the Panama Canal route will derive their revenues from domestic commerce, both transcontinental and coastwise, from for eign commerce to Central and South America, as well as transoceanic interchange at the canal, from the transports tion of passengers and from mail contracts. It is also pointed out that a large quantity of transcontinental business i practically assured to the steamers be cause of the great cheapness of water transportation as compared with rail and moreover, it is stated the average time in which freight is now carried by rail across the United States from coast to coast is from 18 to 21 days, whereas steamer with a speed of 16 knots per hour con carry the same freight, allowing for stops, in 16 days. Thus it will be seen the steamer route would be practically on an equality with the railroad.

It is estimated that the coast-to-coasttraffic, which now amounts to more than 3,000,000 tons a year, will have increase at the time the canal is opened to 4,200-000 tons a year. Of this traffic only 10 per cent. is now transported by the two Isthmus routes and the route around South America. After the opening of the canal transshipment of freight from steamers to cars and then from cars to steamers across the Isthmus will 100 longer be necessary, and the traffic will be sure to increase tremendously.

Arrangements have been made to op erate barges along the South and Centra American coasts near the canal to bring traffic to the steamer line.

#### West Virginia Apples.

The third annual apple carnival of the Berkeley County Horticultural Society, to be held this week at Martinsburg, will tend to emphasize the growing imports of West Virginia in apple-growing. In Berkeley and adjacent counties com cial orcharding is assuming greater proportions every year, and some of the re are suggested in sales already of 15,000 barrels from one orchard for more than \$45,000, and of the sales of other crop ranging from 3000 to 10,000 barrels each and bringing from \$2.65 to \$3.25 a barrel

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# WHAT IS YOUR TOWN DOING?

The Manufacturers Record will be glad to receive brief items of news about siness conditions, opportunities for industrial enterprises and the projected establishment of enterprises in every town in the South. It seeks information of this kind from commercial and industrial organizations and from municipal authorities in every town and city of the South. This information is desired for publication without cost of any kind to the sender, and regardless of whether he is a subscriber or not. The MANUFACTURERS RECORD accepts no paid matter in its reading pages. This department is open only to news facts of interest to investors, homeseekers and manufacturers. Correspondents are requested to give their facts in as condensed form as possible, preferably not over 200 to 250 words. Lengthy letters cannot be published.

#### DUBLIN DEVELOPING.

Chamber of Commerce, Dublin, Ga., September 21. Editor Manufacturers Record:

It has been practically decided here by the leading business men to build a street railway and gas plant this fall. The city has now attained a population of 7000, and, in the opinion of the more aggressive, cannot be expected to continue to develop rapidly without street-car facilities and a gas plant. While it is intended to put in a gas plant that will make the illuminating article, the main need of this at this time is for fuel purposes. The servant question is getting more and more acute here, as it is all over the South all the time. This makes the necessity of a fuel gas plant all the more apparent all the time.

The matter of establishing a street-car line has also been under advisement for some time. It may now be said to be settled that the town will build a line. It will be a "belt," and will be about four miles long. The storage battery cars made by Edison and gasoline cars as well as trolley systems are being investigated. The rapid growth of the city has been such as to attract a great deal of attention in various sections of the country. In 1890 the population was 1000; in 1900, 3000, and now is more than 7000. The growth has been entirely due to the surrounding country, which has no superior for agriculture in the South. Recently the challenge was made through the Chamber of Commerce for the United States to match a 12-acre patch of corn for a purse of \$1000, the challenger to put up \$500 against a similar amount by the local chamber. Many came and saw; came from a dozen States, but the money of the local organization was not covered. The corn is being harvested now, and is showing more than 150 bushels per acre.

Not content with the corn challenge, a challenge to match three acres of cotton was also made. This cotton, four miles east of the city, will make more than 10 bales of 500 pounds each.

These statements will give some idea of the character of the country that surnds Dublin, and which has made it a city of 7000 in so few years, and which is compelling it today to consider the installation of a street railway and a gas plant. The city owns the water-works and the electric-light and power plant, all of which are highly profitable institutions.

The Chamber of Commerce, a thoroughly aggressive organization, will at all times be glad to give quick and reliable information about the city and surround-R. M. MARTIN, ing country.

Managing Director.

#### TULSA IMPROVEMENTS.

Bureau of Information, Tulsa, Okla., September 23. Editor Manufacturers Record:

In your kind reference to this city this week one or two errors crept in, the proposed disbursement for water-works being \$0,000 instead of \$1000, and the assessed valuation being \$17,996,000 for the city and \$44,317,000 for city and county, instead of the figures given.

The city is expending \$291,000 in water

fire-fighting equipment, the bonds for same having been purchased by a local bank at a premium.

The city this week is awarding contracts for 139 blocks, or 9.43 miles, of street paving; estimated cost \$531,000.

One year ago the county authorized the um of \$167,000 in aid of road construction in district No. 1, available as soon as the district should provide \$500,000, its proportion under the law. This week this was done by a vote of five to one by the taxpayers interested. A premium above par has been offered for this entire issue. and work is to commence as soon as surveys and estimates can be made.

In all, Tulsa city and county will expend during the next 12 months on streets and roads \$1,209,000. When this work shall be completed the city will have 34 miles of paved streets, mostly asphalt, and the county 120 miles of the best improved highways. E. T. TUCKER, Manager.

#### WORK AT AUSTIN.

Business League, Austin, Tex., September 22. Editor Manufacturers Record:

Work on the filtering trenches is about empleted, and the assurance is made that it will give us at least 8,000,000 gallens day of fine, clear filtered water.

The final signing of the contract for the rection of the million-and-three-quarterdollar dam has been closed up, and active work will begin in 10 days.

The City Council has set aside a central or neutral part of East avenue for a public cotton market place, and work will be started at once to get this in shape for the large fall trade.

The city has been busy lately in having a force of men sinking and laying storm sewers along the side streets where pav-ing is being done. When this is com-pleted it will be the largest job of work ever executed by the city government, amounting to over \$125,000.

Austin is assured of a new half-milliendollar hotel to be eight stories high, of re-inforced concrete, 138 feet fronting on the avenue and 160 feet back to the alley Work is expected to begin on same early in the spring.

The State Superintendent of Public Buildings and Grounds will shortly begin work on paving the drives and walks through the Capitol ground, and it is expected that \$25,000 will be spent on these

WILL L. VINING, Secretary.

#### ROCK HILL IMPROVEMENTS.

Chamber of Commerce,

Rock Hill, S. C., September 26. Editor Manufacturers Record:

The present year has been the most active in the life of the city of Rock Hill, a young city that has been growing fast. The chance for a larger growth has never appeared to better advantage than now. The activities in the building trades and the large crops that will be put upon the market this fall speak well for a large volume of business in the mercantile line.

The grading for the electric trolley system has been finished and tracklaying is now going on. This proposition is being works, sewers, street improvements and put through in tiptop shape and on sched-

ule time, as under the terms of the franchise cars are to be in operation inside of a very few months.

The contract for the new Presbyterian church in Oakland is about ready to be let, as also contracts for the model school and art building at Winthrop College.

The material for a real "Great White Way" has arrived and it will be installed as soon as the other work being done on the streets is out of the way.

There is not a vacant store, wareho or residence in Rock Hill at this time, and notwithstanding the activities in the erection of new residences there is still a

All of the cotton mills are running fuil time, as well as all the other manufacturing industries in the city.

The vast amount of improvement work has run into seven figures and will take until next year to be completed, the most important of which will be the completion of the sewerage system and the disposal plants, contracts for the later having been made only yesterday.

With all of these improvements under way the town is not being boomed, but the growth and expansion rests on a solid business basis. The future looks good, and, come what may, the city is built upon a hill and cannot be hid. It was founded upon a rock, and it will stand.

W. S. CREIGHTON, Secretary.

#### AN INDUSTRIAL TRIP.

Chamber of Commerce, Sumter, S. C., September 18.

Editor Manufacturers Record:

Under the auspices of the Sumter Chamber of Commerce we propose to run an industrial study trip to the North next spring, to leave here May 6. We propose to visit Richmond, Washington, Balti-more, Philadelphia and New York.

Our object in making this trip is, primarily, to visit a few of the larger retail, wholesale and manufacturing establishments in these cities and to bring buyers and sellers into closer personal acquaintance, for the development of this section.

As a body we desire to acknowledge the fine work you are doing in this development.

Ten years ago Sumter had two banks with a total capital of \$125,000. Today it has five banks with a toal capital of \$370,000, surplus and undivided profits \$284,000, deposits \$1,396,000 and total resources of \$2,506,000. Two of these banks are increasing their capital, one from \$75,-000 to \$200,000 and another from \$25,000 to \$125,000. In the last six months this city expended or subscribed \$40,000 for a Y. M. C. A.; \$40,000 for M. E. church; \$60,000 hotel, with \$15,000 lot additional; \$25,000 for paving; \$25,000 to \$50,000 for right of way and terminals Scaboard Air Line; \$25,000 carriage factory, mostly local capital; \$100,000 fertilizer factory, mostly local capital; \$225,000 new bank stock; \$100,000 buildings and mes, estimated.

We are in the field for new industries and enterprises. We can assure them the loyal support of our business men. Our people stand ready to subscribe to the stock of any paying proposition. We can grant them a free site for their factory and five years' exemption from taxes. We shall be glad to welcome them and show them over the ground.

A. V. SNELL, Secretary,

Detailed information about towns seeking manufacturing enterprises and offering specific advantages for development and business opportunities can be found under the head of "Ciassified Opportunities" on pages 76, 77, 78, and under "Cities, Towns and Railronds Inviting Factories" on pages 104, 105, 106 and 107.

# GOOD ROADS

#### WEEK'S HIGHWAY RECORD.

Progress in Southern Road and Street Improvement.

[Full details of highway undertakings are given in the Construction Department.]

#### Bonds Voted.

Cameron, W. Va.-City voted \$5000 bond issue for paving.

Elba, Ala.—Coffee county voted \$100,-

000 bond issue for road construction.

Fulton, Mo.-Fulton road district voted \$100,000 bond issue for road impreve-

Hinton, W. Va.-Greenbrier district. Summers county, voted \$500,000 bond issue for road improvements.

Tulsa, Okla.—Tulsa county voted \$500. 000 bond issue for road improvements in road district No. 1.

Whiteville, Tenn.-City voted \$10,000 bond issue for sidewalks.

#### Bonds to Be Voted.

Bartow, Fla.-Polk county will vote October 10 on \$500,000 bond issue for road construction.

Covington, Tenn.-Tipton county will vote on \$300,000 bond issue for road improvements.

Covington, Tenn.-Tipton county will vote September 30 on \$300,000 bond issue for road improvements.

Gainesville, Fla.—City will vote Octo-ber 10 on \$35,000 bond issue for paving streets with vitrified brick.

Waco, Tex.-City will issue \$50,000 street-improvement bonds.

#### Contracts Awarded.

Baltimore, Md.—City awarded contract at \$3545.50 to pave Cokesbury avenue.

Columbia, S. C.—City awarded contract for construction of driveways around Statehouse.

Cumberland, Md.-City awarded contract at \$1485.90 to pave 4th street, \$1835.90 to pave Ann street, \$3739 for concrete curb and \$3779.30 for stone curb on Laing avenue.

Jacksonville, Fla.-City awarded contract to construct 23,268 yards of vitrified brick paving at \$1.58 per square yard.

Jacksonville, Fla.-City awarded contract for paving road; estimated cost \$50,-000 to \$60,000.

Memphis, Tenn,-City awarded contract at \$23,860.10 for paving.

Park, R Station Knoxville, Tenn .-- City awarded contract for macadamizing; cost bout \$7500.

St. Bernard Parish, La.—Highways Department, New Orleans, awarded contract at \$12,637.60 to construct shell road,

#### Contracts to Be Awarded.

Charleston, S. C .- City will relay vitrified brick roadway on Rutledge avenue.

Charlotte, Tenn. — Dickson County Turnpike Co., organized with \$20,000 capital stock, contemplates constructing 15 miles of road.

Gadsden, Ala.—City plans construction of sidewalks, curbs and gutters on 5th, Bay and 3d streets.

Huntsville, Tex .- Walker County Commissioners and Good Roads Association are surveying 75 miles of roadway for im-

Laurel, Miss .- City will pave principal

Marion, S. C .- Marion county will contruct 100 miles of sand-clay road.

Moulton, Ala.—Lawrence county will receive bids until October 30 to grade, drain and surface with Tishomingo gravel about 11/2 miles of Hillsboro-Moulton road.

Nashville, Tenn.-City will construct additional granitoid curbing and sidewalk. New Orleans, La.-City receives blds

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until October 2 for surfacing with concreting clay gravel.

Norfolk, Va.—Finance committee approved ordinance appropriating \$5200 for paving, curbing, etc.

Palatka, Ala.—City will construct seven miles of vitrified brick pavement.

Pine Bluff, Ark.—City received bids until September 28 to construct concrete sidewalks.

Pittsboro, N. C.—City will grade streets and construct concrete sidewalks.

Richmond, Va.—State Highway Commission receives bids until October 7 for grading and graveling about one mile of road near Chickahominy River in Henrico county.

Sanderson, Tex.—Terrell county receives bids until November 13 for construction of 1840 linear feet concrete curbing or wall.

Sedalia, Mo.—Pettis county receives bids until October 9 to construct 3½ miles of rock road.

Shreveport, La.—Southern Bitulithic Co., Nashville, Tenn., will pave 14 streets; cost about \$150,000.

Statesville, N. C .- Iredell county will construct about 17 miles of road.

St. Bernard Parish, La.—Highways Department, New Orleans, receives bids until October 10 to construct 12-mile earth road in Franklin parish.

Tulsa, Okla.—City will let contracts September 29 for paving 139 blocks.

Upper Marlboro, Md.—Prince George's county will receive bids until October 3 for grading and macadamizing one mile of road.

#### AN OKLAHOMA VOTE.

#### Tulsa County Will Issue \$500,000 of Road Improvement Bonds.

[Special Cor. Manufacturers Record.]
Tulsa, Okla., September 22.

After a two years' campaign in this city and county, Road District No. 1 yes terday, by a vote of 5 to 1, authorized the issue of \$500,000 of 25-year 5 per cent. road improvement bonds. As the assessed valuation of the taxable property in this district exceeds \$32,000,000, offers have been made already for the entire issue at a shade above par. The bonds will be sold September 25, surveys and estimates will follow without delay, and the work commenced before cold weather. A year ago Tulsa county voted bonds in aid of ad improvement, to be issued as required and used in conjunction with district road improvement funds, one-fourth to be furnished by the county and three-fourths by the district, as provided by State law, Together with the bonds voted yesterday, this will make immediately available more than \$666,000, and is expected to build 120 miles of the best improved public highways.

N. L. Sanders, chairman of the Board of County Commissioners, today announced that soil and drainage conditions over the county will call for three classes road construction. On sandy or soft soil a 10-inch macadam bed 16 feet wide with asphalt filled surface can be built for \$5000 to \$6000 per mile; on solid clay and asphalt surface mixed 10 inches thick, equal to city paying, the cost will not be more than \$3500 per mile, while on good natural roadbed not subject to heavy travel straight macadam and oil can be finished at \$2500 per mile. Tulsa county has its own crude oil and ledges of limestone convenient for loading on cars.

The first stretch of road will extend across this county north and south a distance of 39 miles. It will be on section of the national highway between North Dakota and the Gulf Crossing, South Dakota, Nebraska, Kansas, Oklahoma and Texas. They will follow an east and west highway, intersecting this at Tulsa, reaching all the leading towns in the county.

# RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

#### GEORGIA'S NEW POWER PLAN.

Atlanta Railways to Be Absorbed and an Important Suburban Line Built.

The Georgia Railway & Power Co., capital \$27,000,000, which is applying for a charter in Georgia, as described in the MANUFACTURERS RECORD last week, will, according to later reports from Atlanta take over the various properties mentioned, with capitalizations amounting to a total of more than \$50,000,000, thus:

Georgia Railway & Electric Co. of Atlanta, stock \$10.714,600, bonds \$13,519,000; Georgia Power Co., stock \$10,000,000, bonds \$10,000,000; Atlanta Water & Electric Power Co., stock \$1,500,000, bonds \$1,500,000; Atlanta Hydro-Electric Co. (otherwise known as the Magid development at Tallulah Falls, Ga.), stock \$3,000,000, bonds \$3,000,000. The securities of the Atlanta Gas Light Co. and the Steam Heat & Power Co. are included with the Georgia Railway & Electric Co.

The plans of the new company, in which Canadian and English capital is interested, is said to be to absorb, if possible, all the hydro-electric development enterprises in Piedmont Georgia and to lease and operate the street railways in Atlanta, together with the lighting, heating and power plants there now operated by the Georgia Railway & Electric Co., which has been a highly successful enterprise, and upon the stock of which, it is said, the plan guarantees the payment of 8 per cent. dividends.

A report from Boston, where the control of the company is held, says that it is now earning at the rate of over 17 per cent. on its present common stock, and that the dividend rate was raised last November from 6 to 8 per cent.; also that the price of the shares advanced from about 90 to nearly 157 in Boston within two years. The plan is to exchange the present shares for shares of the new Georgia Railway & Power Co. The capitalization includes \$15,000,000 of common stock, \$2,000,000 of cumulative preferred stock at 6 per cent. and \$10,000,000 non-cumulative 4 per cent.

The incorporators, as heretofore reported, are J. M. McWhinney, Charles Magee, R. Mathison and George A. Kingston of Toronto, Canada; Forrest Adair, Jack J. Spalding, Alex. C. King, Hughes Spalding, George W. Adair and E. Marvin Underwood of Atlanta, Ga.

The plans for the immediate execution call for the construction of a new suburban electric railway connecting Stone Mountain, Clarkston, Scottdale, Kirkwood, Decatur, Hapeville, East Point, Marietta and College Point, besides other suburbs of Atlanta. The present organization of the Atlanta street railways will not be changed.

Jack J. Spalding of Atlanta, who is one of the incorporators of the new corporation, is quoted thus:

"The company will not be affiliated with any of the large electrical interests, neither the Westinghouse Company, the General Electric Co., nor any other. It is an entirely new company to develop electric power, operate street railways and furnish light and power to municipalities and private corporations. We will have as competitors the Southern Power Co., which is operating in South Carolina, close to the Georgia line, and the Alabama Interstate Power Co. In Georgia we will have as competitors the Central of Georgia Power Co., which has a large develop-

ment near Jackson, Ga., and the Columbus Power Co.

"It is our purpose to furnish light and electrical energy to all the larger cities in the Piedmont section, including Rome, Dalton and Cartersville in the northwest, and to Elberton and Hartwell on the northeast. The control of several large water-powers will prevent any interruption of service due to an accident at any plant. All that is necessary is to turn a switch and connect the power from some other plant. We will have 300 miles of steel transmission power lines on steel towers, the voltage to be 100,000.

"In addition to the water-power sites, we will have auxiliary steam plants to supplement the electrical power in time of low water."

#### ARANSAS PASS TERMINAL.

#### Underwriting Syndicate Being Formed in Baltimore to Make Big Improvements.

E. O. Burton of Burton & Danforth, San Antonio, Tex., who are interested in real estate, advises the Manufacturers Record that an underwriting syndicate for the bonds of the Aransas Harbor Terminal Railroad Co. is being formed by Alexander Brown & Sons, bankers, Baltimore, who are also to underwrite the bonds of the Aransas Pass Channel & Dock Co. for the construction of wharves and warehouses. While the terms have been agreed upon, the final contract has not been closed.

A member of the banking firm confirms the above statement, adding that the proposition is as yet entirely tentative. I'urther than acknowledging the accuracy of this he declined to discuss the proposition.

The officers of the Aransas Harbor Terminal Railway Co. are Thos. H. Franklin, president, San Antonio, Tex.; T. B. Wheeler, secretary, Aransas Pass, Tex.; C. S. Corrigan, chief engineer. Its line to be built is six miles from Aransas Pass to Port Aransas, and it includes 500 feet of trestle work, with a drawbridge of plate girder construction 110 tons, with a clear opening of 30 feet. The route is level over low islands and through a shallow bay. Connection will be made with the San Antonio & Aransas Pass Railway.

Continuing, Mr. Burton says that five of the six miles of the graded roadbed are ready for the ties. At present bulkheads are being built on the harbor front at the wharf site to receive filling from the Government dredge. The work at present under way at Port Aransas is as follows:

"Government dredge Guadalupe dynamiting obstructions in the channel. Government dredge Comstock dredging channel to 300 feet wide. D. M. Picton & Co. are building rock breakwater 10,000 feet long on St. Joseph Island for the Government at a contract price of \$200,000. Bowers Southern Dredging Co. is dredging inner harbor 1200 feet wide, 4200 feet long and 20 feet deep, and the channel 5000 feet long, 300 feet wide and 20 feet deep between St. Joseph Island and Harbor Island." The channel at Aransas Pass, it is further stated, has deepened to 23 feet without dredging since the report was made on it.

A map sent by Mr. Burton shows the plans of the two companies in detail. Aransas Pass is between St. Joseph and Mustang islands, which front on the Gulf of Mexico. Within and lying between the pass and the town of Aransas Pass is Harbor Island, a large, low stretch of land across which the channel of the Aransas Pass Channel & Dock Co. will be constructed. Paralleling it on the south side will be the railroad of the Aransas Harbor Terminal Railway Co. Both the

railroad and the channel begin at the town of Aransas Pass, where a turning basin will be constructed, and they terminate on the eastern side of Harbor Island, where a wharf will be built, this being immediately inside of Aransas Pass, which is protected by jetties. There is a Government reservation on each side of the pass for coast defenses to be established. The shallow water, which the railroad will cross, is that of Red Fish Bay, on which the town of Aransas Pass is situated.

#### MISSOURI PACIFIC GROWS.

#### Large Purchases of Equipment to Be Made Immediately.

The annual report of the Missouri Pa cific Railway Co., which also includes the St. Louis, Iron Mountain & Southern Railroad, shows for the fiscal year ended June 30: Gross revenue, \$52,776,592; operating expenses, \$43.329,936; net operating reevnue, \$9,446,656; total income. \$11,256,213; charges and taxes, \$14,108. 243; hire of equipment, etc., \$2,380,508; deficit, \$5,232,539. Gross earnings last year were \$53,019,137; operating expenses, \$37,547,372; net operating revenue, \$15, 471,765; total income, \$17,365,496. After the payment of charges and taxes and the hire of equipment there was a surplus of \$2,759,411.

Concerning the heavy falling off in net revenue, it is stated that it was caused principally by unadjusted claims and the settlement of judgment suits of previous years, together with a readjustment of a previous overvaluation of working assets; part is also owing to increased rates of pay of trainmen and all classes of labor.

Notwithstanding that President B. F. Bush says the industrial business t'ons were not so good during the latter part of the year as in the preceding year (which accounts for the falling off in the amount of freight), average crops have been harvested this season, and the outlook for a good traffic from these sources is very encouraging, and the board of directors ordered the immediate nurchase of 500 stock cars, 500 platform cars and 1000 steel gondola cars. It also authorized him to buy hereafter at his discretion 2000 box cars, 1000 steel gondolas and 500 stock cars. Since May 1, when President Bush took charge of the property, there have been purchased 50 Mikado type locomo tives, 2 consolidation locomotives, 15 Pacific type passenger locomotives and 50 passenger postal and express cars.

During the year there were established 342 new industries along the lines of the company, representing an investment of not far from \$10,000,000 and promising a business of over 122,000 carloads annually.

Concerning the \$20,000,000 of threeyear 5 per cent, collateral gold notes issued June 1, President-Bush says that \$9,200,000 of the proceeds was used to pay the floating debt and \$8,000,000 was deposited with the trustees of the first and refunding mortgage of the Missouri Pacific Railway to be used to purchase equipment and improve the property. There is \$2,100,000 of the proceeds shown as cash on hand.

#### ALONG THE "COTTON BELT."

#### Large Gains in Earnings of the St. Louis Southwestern Railway.

The St. Louis Southwestern Railway, known also as the Cotton Belt, has issued its annual report covering the year ended June 30, 1911. It shows operating revenues \$11,588,036, increase as compared with the preceding year \$001,521; operating expenses \$8,578,155, increase \$422,099; net operating revenue \$3,309,081, increase \$469,422; total net revenue \$3,299,411, increase \$471,563; operating income after deduction of taxes \$2,930,119, in-

increase \$453,739; surplus after payment of interest, dividends, etc., \$420,077, increase \$598,293. The report says:

"Operating revenues aggregated \$11,-888,037, exceeding the 'eleven-million mark' for the first time in the history of company and lacking only about \$112,000 of reaching an aggregate of \$12,-000,000, and show an increase of \$901,520, or 8.21 per cent, over the total operating revenues of the preceding year, which were the largest up to that time. The natural growth and continued development of the country served by your lines of rail-way is reflected in the increase in the volume of traffic handled. While operating expenses were largely augmented by increased wage schedules and increased cost of coal, occasioned by the miners' strikes, it is gratifying to note that the net operating revenue shows an increase of \$469,422, or 16.53 per cent.

"Construction work on the Central Arkansas & Eastern Railroad Co. has progressed satisfactorily. When ballasting is completed this fall the road will be turned over to the St. Louis Southwestern for operation under the terms of the lease. First mortgage bonds of the Central Arkansas & Eastern Railroad Co. to the amount of \$730,000 have been issued and sold to cover all expenses for road and equipment to May 31, 1911.

"The extensive industrial development of the section served by this company is evidenced by the establishment during the past year of many new industrial concerns, diversified in character, amongst which are the following: Twelve hardgood lumber plants, 8 stave mills, 6 ice factories. 4 grist mills, 3 peanut-cleaning plants, 2 mattress factories, 3 brick plants, 5 handle factories, 2 glass factories 3 cement tile works and numerous factories manufacturing furniture, veneer, jugs, concrete blocks, cans, hoops, beehives, pottery, coffins, etc."

#### NEW LINE TO HOT SPRINGS.

# Effects of a Railroad Merger in the Southwest Part of Arkansas.

"With less than 20 miles to build, it will now be but a short time until Hot Springs has an additional railroad," writes George R. Brown, secretary of the Little Rock Board of Trade, to the MANUFACTURERS RECORD. "The Memphis, Dallas & Gulf, the Glenwood & Eastern and the Caddo & Choctaw, short-line roads, have pooled their interests, and will soon have a line running into Hot Springs. As I understand it, the new road will work in close connection with the Rock Island system. It would seem that the Dierks Railroad, from De Queen, isn't in this deal, and we are not advised what their plans are, further than that they are makg figures looking to building a road via Hot Springs and Little Rock to the northern part of the State. Mr. Cravens, a well-known engineer, is said to be promoting this proposition.

"The road, composed of the three short lines mentioned," continues Mr. Brown, "will have, of course, the good offices and friendly co-operation of the Rock Island system, as it will be a valuable connection to their line at Hot Springs. It will open for development a very large timber area, affording a great freight traffic, and at the same time will open for settlement a country already rich in agriculture and only waiting for transportation facilities. Little Rock is certainly pleased to know that Mr. Clark, the Henderson people and the Rosborough interests have gotten together. While it means a big development for Hot Springs, it also will prove of decided value to our city. Almost before

for Hot Springs and the diamond mines,' for this new line places the diamond field in close connection with Little Rock.

"We all hope that the consolidation and building of this new line will be the means of inducing the Iron Mountain to reach out a helping hand to the citizens of Mena and assist them with a road across to Hot Springs. There are wonderful natural resources between Hot Springs and Mena-the great slate quarries."

#### PADUCAH TO UNION CITY.

# Surveys Being Made for the Ken-tucky Southwestern Electric Railway.

Major W. A. Calhoun, chief engineer of the Kentucky Southwestern Electric Railway, Light & Power Co., 609-610 City National Bank Building, Paducah, Ky.,

"I am making a preliminary survey and commercial report on the line between Paducah and Union City at the present time, and when same is completed it is the intention to make a final location survey, and company anticipates starting construction some time next year."

The proposed line is 140 miles long from Paducah, Ky., to Union City, Tenn. H. C. Rhodes is president; E. F. Wheaton, vice-president and general manager; R. H. Scott, treasurer, and John D. Smith, secretary.

The company desires catalogues of all kinds referring to machinery, grading, rails, ties, engines, etc., sent to its offices named herein.

A press report quotes an officer of the mpany as saying that not only will an electric interurban railway be started from Paducah toward Mayfield, Union City, Clinton and Hickman, but a belt line will be run from near Milburn, probably to Lovelaceville, Blandville, Wickliffe, and thence back to Paducah. The reports of the engineers are being awaited before decision is made as to route. Line is to be built and equipped for heavy freight service. Bridges will be required over the Tennessee and the Cumberland rivers. It is estimated that at least \$4,000,000 of outside capital will be enlisted in the enterprise.

#### HAS 150 MILES OF LINE.

# Memphis, Dallas & Gulf Railroad Is Also Building More Track.

A. M. Van Auken, chief engineer of the Memphis, Dallas & Gulf Railroad Co., Nashville, Ark., writes that the mileage of the company is thus: Ashdown to Murfreesboro, 41 miles; Cooper to Rosboro, 13 miles; Glenwood to Loewenberg, 23 miles; Graysonia to Stephens, 6 miles; from 1 mile east of Shawmut to 4 miles east of Stephens, 6 miles; Daleville to

Fairview, 17 miles; total, 106 miles. "Besides this," he continues, "we have considerable mileage of spur tracks, which are not included. Altogether our working mileage exceeds 150 miles."

The Memphis, Dallas & Gulf is proceed-

ing with construction.

#### INTERURBAN WORK SOUTH

# American Traction & Power Co. Or-ganized at Indianapolis for Extensive Work.

A dispatch from Indianapolis says that the American Traction & Power Co., chartered under Delaware laws, has been organized with \$500,000 capital for extensive interurban railway development in the South, its purpose being to organize, finance, build and operate steam railroads,

electric railways and power plants.

It is further stated that the company is we know it the short gap will be built to a holding corporation for the control of include six small wooden trestles. This steel business can reasonably be expected."

crease \$471,976; total income \$3,457,004, the Springs, and it will then be 'all aboard the Kentucky Southwestern Railway, Light & Power Co., described elsewhere in this issue, and which proposes to build about 140 miles of line from Paducah, Ky., to Union City, Tenn. It will also control the Yazoo Valley Electric Railroad, Light & Power Co. in Mississippi, a new propo sition. It is said that the capital will probably be enlarged.

The officers are: President, H. C. Brubaker of Indianapolis; first vice-president, E. F. Wheaton of Henderson, Ky.; second vice-president, W. A. Calhoun of Buffalo, N. Y.; third vice-president, John Francis of Cedar Rapids, Iowa; secretary, G. E. Bruce of Indianapolis; treasurer, H. P. Dew of Blacksburg, S. C.

#### New Equipment, Rails, etc.

The Missouri Pacific Railway directors have ordered the immediate purchase of 1000 steel gondola cars, 500 stock cars and 500 platform cars. President Bush was also authorized to purchase at his discretion 2000 box cars, 1000 steel gondola cars and 500 stock cars.

The Chicago, Memphis & Gulf Railway, says a market report, has ordered a mogul locomotive and one American locomotive from the Baldwin Works, Philadelphia. The company is also reported to have ordered 100 freight cars, 1 passenger coach and 1 caboose

A dispatch from Houston, Tex., says that the Southern Pacific has ordered 14 all-steel mail and baggage cars, each 60

The Norfolk & Western Railway is re ported in the market for 30,000 tons of steel rails to be delivered next year.

The Tuscaloosa Mineral Railroad, Tus caloosa, Ala., is reported to have ordered 440 tons of bridge steel from Riter &

The New Orleans Belt Line, according to a report from that city, will purchase steel rails, bolts, spikes and ties.

The Louisiana Railway is reported to

have ordered a 54-ton locomotive from the Baldwin Works.

The Baltimore & Ohio has ordered from the Barney & Smith Car Co., Dayton, O., 10 steel coaches, and from the Pullman

Company, Chicago, 10 steel postal cars.

The Louisville & Nashville Railroad, according to a market report, is getting prices on 500 steel underframe box cars and 500 steel gondola cars.

#### Atlantic, Okeechobee & Gulf.

T. P. Bell, secretary of the Atlantic, Okeechobee & Gulf Railway Co., Tampa, Fla., writes confirming the report that the engineering contract covering the surveys for 308 miles of line to be built by the company has been awarded to the W. K. Palmer Company, engineer, of Kansas City, and the contractor is required to begin the survey not later than October 9.

The executive offices of the railroad company have been moved from the Audubon Building, New Orleans, to the Frank-lin Square office building in Tampa, where Mr. Bell is in charge. Hiram Mc-Elroy, chief engineer, also has offices there, and President H. C. Ferriot divides his time between the New Orleans and the Tampa offices.

Mr. Bell adds that "a sufficient office force has been engaged to handle the work, and matters will be pushed as rapidly as possible."

#### Westmoreland to Lafayette.

J. L. Holland, Lafayette, Tenn., writes that the Nashville, Lafayette & Eastern Railroad Co., of which he is president, will build a line about 14½ miles long from Westmoreland to Lafayette, Tenn., via Eulia, Alton Hill and Sullivan. This will

will be only the first section of the line, which is intended to extend from via Red-boiling Springs to Burnside, Ky., about 130 miles, the latter point being on the Queen & Crescent Route and at the head of navigation on the Cumberland River.

#### A Merger of Local Lines.

B. L. Dulaney, president of the Bristol Traction Co., Bristol, Tenn., writes that it has purchased the Bristol Belt Line and the Holston Valley Railway, running from Bristol to Big Creek Park, on the Holston River. The company now has 16 miles of line in operation and three miles of new track under construction; total, 19 miles. There are 14 trolley cars. motives, 4 passenger coaches and 12 freight cars. Fred Dulaney is vicepresident and general manager, and N. D. Buchanan, Jr., treasurer.

#### Hampton & Yorktown Railway.

Sidney J. Dudley, Hampton, Va., writes that the proposed Hampton & Yorktown Railway will be 22 miles long between the two points named and will require three bridges, varying from one-half to three-quarters of a mile long. It is not yet determined when bids will be received for construction, as plans and specifications are not completed. Maps and profiles only partly finished. It is undecided as to motive power, but either electricity or steam may be used. Girard Chambers is the chief. engineer.

#### Annual Report of La Belle Iron Works.

The annual report of La Belle Iron Works of Steubenville, O., shows net earnings for the fiscal year of \$1,460,513.20; cash dividends on capital stock, \$991.515, and surplus for the year, \$300,637.80, and total assets of \$17,545,301.29.

The company mined 258,899 gross tons of ore to supply the requirements of the Steubenville furnaces, which were 36 per cent, less than for the previous year. Owing to the low price of coke, all coke used was purchased instead of being produced at the company's coke plant. The coal output was 196,381 net tons, as compared with 106,630 tons the previous year.

The sales of pig-iron increased 9 per cent., while sales of billets and slabs decreased 24 per cent. and finished goods 10 per eent. The production in these items was pig-iron, 228,425 gross tons; billets and slabs, 264,970 gross tons, and finished goods, 347,498 gross tons. The payroll for the year aggregated \$2,869,738.60, as against \$3,095,507 the previous year. The aggregate value of the shipments for the year was \$10,378,279, a decrease of 24 per cent. from previous year. The company experienced with the steel trade in general a slack market and lower prices, and no compensating advantage in the way of lower labor rates.

A large part of the falling off is attributed to the condition of the car-building trade and the disinclination of the transporting companies to buy much needed equipment. This necessitated the curtailment in production. The president, Mr. Isaac M. Scott, states that, "owing to the fact that so many things have happened, and are happening, of a nature tending to disturb the purchaser, it is difficult to form an intelligent opinion as to what might be expected in the near future, or when buying will again be resumed on what may be termed a normal basis. Underlying conditions still remain sound, and sooner or later the transportation companies must come into the market as buyers on a large scale. But until this comes about, no real improvement in the

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# MINING

#### SECOND IN COAL PRODUCTION.

### West Virginia Takes Lead Over Illi-nois in 1910.

West Virginia held second rank am the great coal-producing States in 1910. being exceeded in output by Pennsylvania The United States Geological Survey has just made public a report by Edward W. Parker, coal statistician, giving the total production for West Virginia in 1910 as 61,671,019 short tons

West Virginia, says Mr. Parker, may now be considered firmly established in second place among the coal-producing States, though its big lead over Illinois in 1910 was due to abnormal conditions and may not be repeated for several years. most influential feature of the coalmining industry in 1910 was the strike in States of the Middle West, which put Virginia's rival, Illinois, at a de cided disadvantage, most of the larger mines of the latter State being completely shut down, while West Virginia got the benefit. The effect of the strike, as shown by the statistics of production in Illinois and West Virginia, was a decrease in the output of the Illinois mines from 50,904,-990 short tons in 1909 to 45,898,846 short tons in 1910, whereas the production of West Virginia increased from 51,849,220 tons to 61,671,019 tons, a gain of 9,821,799 tons, or 18.9 per cent. The value of the West Virginia production increased from \$44,661,716 in 1909 to \$56, 665,061, a gain of \$12,003,345, or 26.88 per cent.

In spite of the fact, however, that the output of West Virginia exceeded that of Illinois by 15,772.173 tons, and of the further fact that West Virginia's gain in value was considerably more in proportion than the gain in tonnage, the total value of the West Virginia product exceeded that of Illinois by only \$4,261,434. Two reasons exist for this. In the first place, mining rates are higher in Illinois than in West Virginia, and a higher price is necessary. But what makes the higher price possible is, in the second place, the great advantage possessed by Illinois in the large manufacturing industries within the State or in immediately adjoining terri-

West Virginia has an advantage in the superior quality of coal. It ranks second among the coal-producing States (producing more coal than any country outside of the United States except Great Britain and Germany). West Virginia ranks twenty-ninth in the value of its manufac-Probably the larger part of the West Virginia coal consumed within the State is that burned in the locomotives hauling it away. Moreover, the high quality coal of West Virginia is the lowestpriced coal in the United States. If the small mines are left out of consideration there were only three counties in the State in which the average price in 1910 exceeded \$1 per ton, and the aggregate output of these three counties was only a little over 1,000,000 tons—less than 2 per cent, of the total production. The general average for the State was 92 cents. In 1909 it was 86 cents.

#### HEAVY INCREASE IN OUTPUT.

#### Kentucky's Large Coal Production

There was a notable activity in Kentucky's coal mining in 1910, according to figures just made public by E. W. Parker of the United States Geological Survey.

The total production of the State was 14,623,319 short tons, valued at \$14,405,- 3,925,935 short tons, or 36.7 per cent., in quantity, and of \$4,325,970, or 42.92 per cent., in value.

The stoppage of work in the coal mine affected by the general strike of 1910 was of material benefit to the operators and miners in Kentucky, particularly in the Western field. During the six months of idleness in the other States, the shipments over the Louisville & Nashville Railroad from the Western Kentucky coal field increased nearly 70 per cent, over the corresponding period of 1909.

Notwithstanding the extraordinary demand upon the Kentucky mines, the labor supply was entirely adequate, as many of the miners who were thrown out of work by the strike in Illinois and the South-States sought employment Kentucky and in other States not affected by the strike order. By thus making up the deficiency caused by the idleness in the competitive States the miners aided materially in securing their demands

During 1910 the coal mines of Kentucky gave employment to 20,316 men, who worked an average of 221 days. bor disaffections in the Kentucky mines were limited to short strikes in 14 mines.

Kentucky is one of the leading States in mining coal by the use of machines and ranks next to Ohio in the percentage of machine-mine output to the total production. In 1910 out of a total of 14,-623,319 short tons, 9,362,851 tons, or 64 per cent., were machine-mined.

#### ARKANSAS PRODUCES LESS COAL.

#### Strike of 1910 Causes Loss in the Annual Output.

Arkansas' production of coal in 1910, according to E. W. Parker in a state just made public by the United States Geological Survey, was 1,905,958 short tons, with a value at the mines of \$2,979,-213, a decrease of nearly one-fifth from the tonnage of 1909.

The coal-mining industry of Arkansas. like that of the other States of the Western interior region except Iowa, was practically out of business for six months in 1910. The coal strike, which began on April 1 and lasted until September 15, affected nearly 90 per cent, of all the coalmine employes in Arkansas, and the total time lost was within 1 per cent. of the total time made during the year. total working time amounted to 713,794 days and the time lost was 713,210 days. Efferts to make provision against the strike were made during January, February and March in all the States affected by it, the operators being inspired by a to accumulate stocks of coal and the miners by the necessity for increa their earnings in order to tide over the period of idleness. The struggle was evidently to be bitter and prolonged, and both sides made preparation for it.

After operations were resumed, about October 1, every ton of coal which it was possible to mine with the available labor was mined. The activity before and after the strike made up for a part of the loss in tonnage during the summer, so that instead of a decrease in production of 50 per cent., proportionate to the loss in time, the output decreased only 471,199 short tons, or 19.8 per cent., from 2,377,157 short tons in 1909 to 1,905,958 tons in 1910. The value decreased from \$3.523.-139 to \$2,979,213, a loss of \$543,926, or 15.44 per cent.

#### Fluorspar Production.

Fluorspar, one of the lesser minerals and one of which many people have probably never heard, has come to occupy a comparatively important place in everyof glass, of enameled and sanitary ware, in refining antimony and lead, in the production of aluminum, and as a flux in blast furnaces and in the manufacture of steel in basic open-hearth furnaces. The production of open-hearth steel alone in 1910 was over 15,000,000 long tons. The production of fluorspar, according to Ernest F. Burchard of the United States Geological Survey, in a report on fluorspar and cryolite just issued, increased from 18,450 short tons in 1900, valued at \$94,-500, to 69,427 tons in 1910, valued at \$430,196. There was an increase in 1910 of 37 per cent, in quantity and 47 per cent. in value over the figures for 1909. The deposits which have been exploited are in Arizona, New Mexico, Colorado, Illinois, Kentucky, Tennessee and New Hampshire. Illinois is much the heaviest producer.

There was also imported in 1910, according to Mr. Burchard, 42,488 short tons, valued at \$135,152. Mr. Burchard's report contains, in addition to the statistics of the industry, a discussion of the methods of mining and milling fluorspar as well as a description of recently-discovered high-grade deposits in New Mexico.

Cryolite is one of the comparatively few useful minerals which has not yet beer discovered in commercial deposits in the United States, at least not in deposits such as can compete with those furnishing the imported product. In fact, there is but one important known deposit in the world, namely, at Ivigtut, an Eskimo hamlet on the southern coast of Green land. Even this deposit is only about three acres in extent. Cryolite is used principally in the manufacture of opaque glass, for enameling of ironware, in the netallurgy of aluminum, and as a flux in the manufacture of white Portland cement.

According to the United States Geo logical Survey, the imports of cryolite into the United States in 1910 amounted to 36 long tons, valued at \$2343. Refined cryolite is relatively high-priced, selling in carload lots at about \$140 a ton. copy of the Survey's report on fluorspar and ervolite for 1910 may be obtained on application to the Director of the United States Geological Survey, Washington, D. C.

#### North Carolina Gold and Silver.

North Carolina regained first place among the Eastern States in 1910 in the production of gold. The year's mine production, according to H. D. McCaskey of the United States Geological Survey, 3291.68 fine ounces, valued at \$68,045. an increase over the output for 1909 of 1345.55 fine ounces and of \$27.815 in value. The yield of silver, recovered in refining the gold and copper produced, was 9053 fine ounces, valued at \$4888, an increase of 8554 ounces and of \$4629 in value. The copper production was 140, 514 pounds, valued at \$17,845, a decreas of 83,998 pounds and of \$11,341 in value. The total value of the production of gold, silver and copper in North Carolina in 1910 was \$90,778, an increase over the corresponding value for 1909 of \$21,103.

There were 23 placer mines in operation in 1910 and 13 deep mines. The deep mines produced 14,914 short tons of ore of which 12,693 tons were gold-quartz ores, with an average total recovered value in gold and silver of \$4.42 per ton, and 2221 tons were copper ores, with an average precious metal value of \$2.51 per ton and yielding 63.2 pounds of copper per The placers of North Carolina ton. yielded 497.34 fine ounces of gold and 43 fine ounces of silver; the siliceous ores produced 2745.77 fine ounces of gold and Holland and Scandinavia about 15 years. 887, as against 10,697,384 short tons, day affairs. It is used in the manufacture 456 fine ounces of silver, and the copper is well acquainted with the manufacturers

ores yielded 48.57 fine ounces of gold and 8554 fine ounces of silver. The notable production of silver from North Caroling in 1910 was therefore from copper ores

#### Will Develop Kaolin Deposits.

The Rossland Development Co., Robert R. Zell, president, 376 Chamber of Com merce Building, Birmingham, Ala., has purchased kaolin lands in Marion of Alabama, known as Chalk Bluffs, and will develop them. This property embraces 1200 acres of land, and is estimated to contain 5,000,000 tons of high-grade kaslin. The company states that it has apranged with parties at Rossland City, Ala., to install a plant for manufacturing chinaware, mosaic tiling and enameled brick with natural gas, and will mine and ship kaolin for both the general market and the Rossland City plant.

#### Big Deposit of Silica.

Mr. J. R. Case, general manager of the Arkansas Lime Co., Ruddells, Ark., in a letter to the MANUFACTURERS RECORD

"The writer has just found a large deposit of almost pure silica, which assays 99% per cent. silica. This deposit is 110 feet in thickness, and contains more than 100,000,000 tons of this high-grade silica It is within one-eighth of a mile of the railroad. We would be glad to correspond with any companies who use silica who might want to secure an interest in it for immediate development, but we prefer to mine and ship to consumers."

#### FOREIGN NEEDS

Machinery and equipment wanted abroad are mentioned in many letters received by the MANUFACTURERS RECORD, which is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. For the benefit of our subscribers seeking foreign trade we publish the following extracts from recent

#### For Cigarette Manufacturers.

The Macedonian Tobacco Co., Ltd. Cavalla, Turkey, writes to the Manufac-TURERS RECORD:

"We are debtors for your address to the American Chamber of Commerce of Constantinople, and we venture to address you in order to request you the favor of letting us have the names and addresses of ome cigarette manufacturers of Southern America, to whom we should like to submit our offers. We are a British concern recently established, with the object of dealing in tobacco in leaves, by whole and carrying on in Turkey and elsewhere a general tobacco business. Having secured a large stock of this finest arou Turkish product, which stands unrivaled in the world for its high-grade quality and unexcelled fragrance, we are anxious to give to American manufacturers of cigarettes a trial of same, feeling confident that once we make a start, we shall have the pleasure of continually supplying their demands.

#### To Represent Manufacturers.

Ugland & Bankwitz, Catharinenstra 31, 1, Hamburg, Germany, write to the MANUFACTURERS RECORD:

"We wrote the National Association of Manufacturers about Vulcan fiber some time ago. We want to represent a manufacturer of this article, which is not represented in Europe. Also we are open for any novelty in building and branches. Our Mr. Ugland, born a Norwegian, traveled in Germany, Belgium.

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and shipping firms in those countries, and is willing to take up any promising nov elty as sole agent."

#### Motor Road Rollers, Tractors, Etc.

A. S. Maritim, Ingenior Alf Nielsen, Christiana, Norway, writes to the MANU FACTURERS RECORD;

ewe receive now and then your newsaper, which has been of great use to us, finding different firms there advertising goods in our line of business, and hereby we beg to ask if you kindly would inform as of other firms which we have not found sufficiently represented in your paper. We should very much desire to enter in connection with manufacturers of motor road rollers, tractors and delivery motor cars, as well as with manufacturers of motor cars at moderate prices and of good look."

#### To Represent Manufacturers.

P. L. Boswell, address care of F. J. Boswell, 327 Ellicott Square, Buffalo, N. Y., writes to the Manufacturers Record:

"The special lines of materials wanted would be parts for boot and shoe manufacturers, clothing manufacturers, such as pailors' trimmings, buttons, etc.; suspender makers, tie and umbrella makers, rubber, ots, shoes, macintoshes. These are parts or material in connection with the manufacture of the respective industries. I would also like to have a general list of manufacturers of the finished article, who are desirous of working up trade with Anstralia."

#### Agricultural Machinery.

Mark Karteschinsky, Rostoff a Don, Russia, writes to the Manufacturers

"I am particularly interested in tools, equipment and machinery for agriculture, such as pumps, sprays of various kinds, Climax spray, Triumph spray, oil cans for use on agricultural machinery, bemp twine, etc., and I would be obliged to you if you would put me in communication with people handling this line of goods and give me any other information in regard to them."

#### Machine to Grind Cocoa.

Gillespie Bros. & Co., 4 Stone street, New York, write to the MANUFACTURERS

"We have an inquiry from one of our clients in the West Indies asking for a machine to grind cocoa and mix it after being ground with sugar and cinnamon. We presume that what he wants is a machine to make chocolates."

#### Shuttle Blocks.

Ernst Bunge, 124 Boulevard De Strassbourg, Le Havre, Seine Infre., France, writes to the MANUFACTURERS RECORD:

"I would be most thankful if you could put me in touch with some reliable manufacturers of shuttle blocks in dogwood and

#### Anchor Duck Mills' Addition.

The Anchor Duck Mills of Rome, Ga., will erect an additional building 80x100 feet, of brick construction and three stories high. This company will also erect 10 additional cottages for operatives, and its building contracts have been awarded to J. F. Dupree & Son of Rome. The new mill building and equipment of machinery are reported to cost about \$40,000. At present the Anchor plant has 14,000 spindies, 18 broad looms, 42 bag looms, etc., and employs 300 operatives, its output being cotton duck, etc.

### **TEXTILES**

COFFEE AND COTTON.

Suggestion as to the Prices of Tex-tile Goods.

Mr. William B. Reily, president the Reily-Taylor Company, New Orleans, La., writes to the MANUFACTURERS RECORD:

"During the summer of 1910 I spent 30 days in the mountains of North Carolina, While there I had the pleasure of meeting owners and operators of cotton mills. Many told me that they were not making any money on account of the high price of cotton. I asked why they did not advance the price of goods in accordance with the advance in the price of cotton. They said it was impossible to do it. I argued with them that I felt fully assured they were mistaken, and could make this advance if they would only try.

Some three months later I found our coffee business in almost identically the same condition as that of the cotton-n-ill men. The price of green coffee had advanced from 7 cents to 14 cents per pound. Our 40 traveling salesmen with one accord told us it would be impossible to advance our leading brand in accordance with the advance in the price of green coffee; that for nine years the consumers had been educated to pay only so much for this coffee, and they would not pay more. Many of our traveling men we had to discharge simply because they had convinced themselves that they could not get this advance. We at once employed new men to take their places. Those i men went ahead selling this coffee at the advance without any trouble whatever. They knew nothing about the old price, and consequently had no trouble in getting the advance. If the coffee importers and roasters of the United States had only had a lot of disorganized coffee planters in Brazil to deal with they would have quickly forced a decline in the price of green coffee. As the matter stood, however, the coffee growers of Brazil formed a combination with wealthy parties or corporations in New York and Europe, and with the Brazilian Government. This combination has maintained the high price for green coffee now for more than 12 months, making the coffee planters of

"It would seem that our cotton-mill owners and also our cotton planters could each learn a lesson on the cost of raw material if they will only demand it. The cotton planters can get a profit for their cotton if they will only organize and get a few strong leaders and financial backers and stand together. The Germans have a proverb, 'They can who think they can.' '

#### New England Mill Men.

The program of the semi-annual meeting this week at Manchester, Vt., of the National Association of Cotton Manufacturers includes, beside the address of welcome by Governor John A. Mead of Vermont, the response by R. M. Miller, Jr., of Charlotte, N. C., and the address by President Franklin W. Hobbs of Brookline, Mass., the following papers:

"Organization of the Carding Department in Cotton Mills," by Henry K. Rewell, Boston, Mass.; "Executive Management of the Textile Plant and Its Relation to the Market," by Arthur H. Gulliver, Norristown, Pa.; "The Examination and Testing of Cloth," by Prof. William Myers, Municipal School of Tech-nology, Manchester, England; "Alignment of Shafting and Machinery," by George W. Loggie, Boston, Mass.; "An Exact Method of Measuring Cotton Staple," by Dr. N. A. Cobb, U. S. Department of Agriculture, Washington; "The Work of Hildebran, N. C., is reported as to in-

the Monetary Commission," by Hon, Jehn Wingate Weeks, West Newton, Mass,; "Tests on the Transmitting Capacities of Different Pulleys in Leather Belt Drives," carding machines, etc., on the production by Prof. Will Miller Sawdon, Sc.D., Cornell University, Ithaca, N. Y.; "The Enforcement of Contracts of Sale," by Walter S. Newhouse, Esq., New York, N. Y.; "The New York Cotton Exchange in Its Relations to Merchandising Cotton," by George W. Neville, president New York Exchange: "Practical Considerations in Cotton Mill Illumination," by J. M. Smith, Cleveland, O., and "Textile Education from a Manufacturer's Standpoint," by Edwin H. Marble, Worcester, Mass.

#### Aldora Mills, Etc.

The Aldora Mills of Barnesville, Ca., has awarded contract to Pike Bros. of Lagrange, Ga., for the construction of a two-story 100x160-foot brick building of mill construction, to cost about \$18,000. F. D. Milstead of Atlanta is the architect furnishing the plans and specifications, as stated last month. This addition will enable the company to install looms so it can weave into cloth the cotton yarn manufactured by its present equipment of 10,000 spindles. Reports have stated that the new building and machinery will cost about \$150,000.

#### The Cotton Movement.

In his report for September 22 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 22 days of the present season was 962,732 bales, an increase over the same period last year of 323,868 bales. The exports were 466,277 bales, an increase of 142,748 bales. The takings were, by Northern spinners, 72,160 bales, a de-crease of 35,624 bales; by Southern spinners, 115,198 bales, an increase of 17,080 hales.

#### Enlarging the Fidelity Mill.

The Fidelity Hosiery Mills Co. of New ton, N. C., will erect a two-story 50x100-foot brick building for its plant, but will not begin construction until next spring. At the present the company will install some new machinery and add to its equipment after the new structure mentioned has been completed. The Fidelity plant now has 200 knitting machines and ac-companying equipment, driven by electric power and employing 100 operatives on the production of seamless hosiery.

#### Orange Cotton Mills.

The Orange Cotton Mills of Orange-ourg, S. C., George H. Cornelson, president, is reported as to install new machinery to replace a portion of its present equipment. This plant is equipped with 5300 spindles, 30 carding machines and accompanying machinery for the production of cotton yarns.

#### Continental Converting Co.

The Continental Converting Co. of St. Louis has been incorporated with \$100,000 capital stock by Walter H. Carter (American Hotel), O. M. Hill and T. A. Meyers. This company will establish the textile products bleaching and finishing plant recently mentioned as planned by Mr. Carter.

#### Vivian Cotton Mill.

The Vivian Cotton Mill of Cherryville, N. C., will, it is reported, amend its charter in order to issue \$30,000 of preferred stock. This plant is equipped with 2506 ring spindles, 50 broad looms and 12 carding machines for the production of

# Henry River Manufacturing Co.

of cotton yarns.

# LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

#### To Develop Texas Timber.

The Texas Land & Lumber Co., Moore-Burnet Building, Houston, which was recently reported as incorporating with a capital stock of \$310,000, owns 5094 acres of land estimated to contain 43,750,000 feet of long-leaf yellow pine, 27,000,000 feet of white oak and 6,750,000 feet of red gum, ash, hickory, etc. The company will install one or more sawmills on the Sabine River for the development of its timber, but pending the erection of these will install at once a small mill to facilitate the crection of its plant and tenant-houses and to saw ties for its use. It will make a specialty of export and long length lumber and timbers. Officers of the company are P. B. Thornton, president; J. J. Hines, first vice-president; B. C. Pharr, second vice-president; J. B. Brewton, third vicepresident, and E. P. Gaines, secretary and

#### To Develop Arkansas Clay and Timber.

Referring to its recent purchase of proprty in Arkansas, the National Druggists' Syndicate, E. H. Morebeck, secretary. Unity Building, Chicago, writes to the MANUFACTURERS RECORD as follows: "The National Druggists' Syndicate has purchased about 1000 acres of land near Camden, Ark., on which there is about 4,000,000 feet of pine and about 500,000 feet of oak, etc. The property also contains a very peculiar mineral which is very valuable as to pharmaceutical properties, and its by-products, such as fireclay, vitrified brick, tile and terra-cota of various descriptions. We are preparing to develop this property at an early date."

#### Purchases 30,000 Acres.

The Washington Lumber Co., 612-14 Colorado Building, Washington, D. C., recently organized with a capital stock of \$1,500,000, will develop timber lands in Virginia. With reference to its undertaking the company advises the Manu-FACTURERS RECORD that it has recently purchased 30,000 acres of timber in Giles and Craig counties, Virginia, including oak, hickory and poplar, and estimated to contain 100,000,000 feet. It is arranging to install a band mill of 100,000 feet daily capacity, to be located on the Norfolk & Western Railroad. John T. Flournov is president of the company.

#### Amount of Wood in Paper.

The following figures as to the amount of wood required to make one ton of news paper are given by Hardy S. Ferguson, who was chief engineer of the Great Northern Paper Co. for many years, but is now a consulting engineer at 200 Fifth avenue, New York: Considering that one cord of wood will yied one ton of air dry ground wood pulp, and that two cords will yield one ton of sulphite pulp, and that in the paper mill 2 per cent. of the sulphite is wasted and that 8 per cent. of the sulphite ground wood is wasted, then one ton of paper containing 25 per cent. sulphite requires 1.32 cords; one ton of paper containing 221/2 per cent. sulphite requires 1.30 cords, and one ton of paper containing 20 per cent. sulphite requires

should entail little, if any, expense for

sections of cast iron, thereby reducing

The Milwaukee Corrugating Co.'s

Exhibit.

cost of maintenance.

# **MECHANICAL**

#### Steel Windows and Factory Lighting

The importance of sufficient light and ventilation in industrial buildings is now well recognized, and the means of furnishing them are carefully included in architects' specifications for modern buildings. ventilating system is the steel window

of upkeep; they are fireproof; the latter types of steel windows for this purpose are made from solid bars of rolled steel, light in appearance, but with required rigidity, while the frame is contained in the sash itself, doing away with the necessity of obstructing frames and heavy di-

do not require constant repair and cost | vacuum in the front end and at the same

viding mullions, which would take up An important element in this lighting and much space at the expense of light for the workers; ventilation can be put in these framing provided with the percentage of windows in whatever percentage of area is

FENESTRA WINDOWS IN MACHINE SHOP.

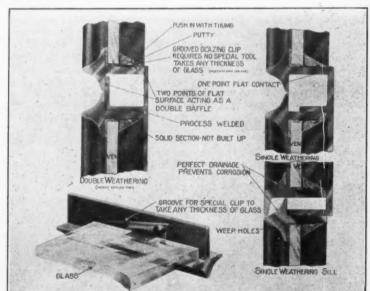
ventilating area that may be required, desired; daylight and its advantages are by fitting movable frames. The accompanying illustrations show examples of the use of fireproof construction with steel window frames as manufactured by the Detroit Steel Products Co. of Detroit, and Downing Locomotive Draft Appliwell known as Detroit Fenestra windows. One illustration shows the glazing details and the other shows Fenestra windows of the machine shop of the C. A. Treat Manufacturing Co., Hannibal, Mo.

recognize that it is as necessary to give arrangement led into a continuation of

had to the full extent of the window opening, advancing hygienic and general working conditions.

# ance.

An appliance which it is claimed will save 5 to 15 per cent. of the fuel in locomotives has been designed and is introduced by the Downing Locomotive Draft Superintendents of modern factories, Appliance Co., Candler Bldg., Atlanta. machine shops and other institutions .This appliance consists of a double-nozzle



DETAIL OF DETROIT FENESTRA GLAZING.

them with efficient machinery and tools with which to do their work. Consequently, it is the aim to throw the shop as nearly open as possible to daylight. Windows of solid steel bars provide the means which simplify the problems of daylight and fresh air. Davlight, with its benefits, is easily had by using these steel windows now so generally manufactured for such purposes. It is for several reasons that these windows have become a

men proper light and air as to furnish the stack, which forms an expanded pipe. The peculiarity of the device is that the stack, pipe and nozzles are all tapered. The pipe is merely a continuation of the stack, and has a machine joint and is bolted rigidly to the base of the stack. There is some difference in the arrangement of the deflector sheet and netting as compared with the old methods. Coal economy is the object sought. The Downing appliance is designed to secure this economy by maintaining a greater area of

time equalizing the draft on all parts of renewals. Each piece is made of cast the fire. The appliance is also self-clean iron, and the stack is assembled in triple ing, and requires no handhole plates or

The theories upon which the appliance is based are that the best way to interest the fireman and engineman in coal economy is to put the engine in a mechanical

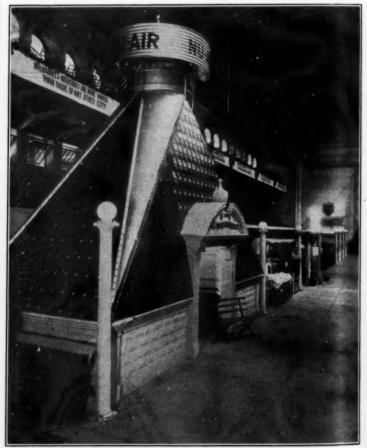


DOWNING LOCOMOTIVE DRAFT APPLIANCE.

tion of black smoke should be an aim, as this is a form of waste coal, that is, unconsumed carbon; that expansion of exhaust steam after it leaves the exhaust nozzle is an important consideration in draft in locomotives, in that steam with the gases expands in rising and the lower rugating Co., which was handsomely deco-

condition to save coal: that the preven- | Manufacturers' Association, and proved to be extremely interesting and educational in portraying to the general public the great volume and assortment of Milwaukee products.

Among the most interesting of the exhibits was this one of the Milwaukee Cor-



THE MILWAUKEE CORRUGATING CO.'S EXHIBIT.

section of the stack should be well filled. | rated inside with "Invisible Joint" metal The largest opening being at the top, reduces the resistance of the exhaust steam, bringing about a soft exhaust, mild action on fires, equal distribution of air through each opening and a draft not sharp enough to disturb the fine, pulverized coal and pull recognized factor in industrial construc-tion, vis.: Steel windows are durable, and draft on the fire, and produces high draft appliance, when once installed,

ceilings and side walls, the exterior being covered with rock-face siding, galvanized-steel pillars and arch. The conical-shaped roof was covered with "Titelock" shingles, some of which were formed from coldrolled copper, others from galvanized tin, of th of sh intere

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of the "Nu-air" ventilators. The fact that "Titelock" metal shingles are made of sheet metal was new to many of the interested observers of this exhabit, and special attention was given to this feature.

#### Atlas Crude-Oil Engines.

The economy of internal combustion ngines using cheap crude oils is exemplifed in recent tests made with the Atlas crude-oil engine of the Diesel type at the Atlas Engine Works, Indianapolis.

The Atlas crude-oil engine is made in

adding operating costs, etc., it is stated that the cost of current produced by an Atlas oil engine is less than one cent per kilowatt hour. The cost of power for other purposes is in same proportion.

The Atlas Engine Works sells these engines under definite guarantees of fuel consumption during the entire first year of operation.

A complete statement of the construction, operation, advantages, fuel economy, comparisons with other forms of power, other fuels, etc., is given in the bulletin



FIG. 1.-ATLAS CRUDE-OIL ENGINE

of 300, 450 and 600 brake horse-power, respectively. It is shown in the accompanying illustrations, of which Fig. 1 represents the 300-horse-power engine direct connected to a 200-kilowatt electric generator. Fig. 2 shows the valve mechmism and operating gallery. This is a four-cycle engine, in which air is compressed to 500 pounds per square inch, reding in a temperature of about 1000

two, three and four-cylinder vertical units, | recently issued by the company. Other information refers to endurance and economy tests, records of operation, starting by means of compressed air supplied in metallic bottles, regulation by governor, etc.

The tests of this engine were made by C. E. Sargent, M. E., of Chicago, an authority in this field. The results of his test are published in namphlet form by the Atlas Engine Works. The object of the test was to determine the quantity of degrees Fahr.; a fuel pump then sprays fuel used per unit of output; the speed small quantities of crude oil into the cylin- of the engine under all conditions of load.

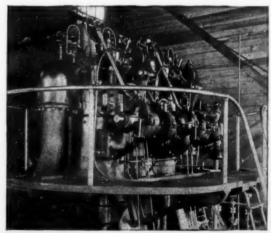


FIG. 2.—OPERATING PLATFORM OF ATLAS ENGINE.

the heat generated by the high comprestion. The power is produced from this combustion and the piston caused to contime its work conforming to the cycles of the operations. This is the whole principle of the Atlas crude-oil engine. The engine is free from explosive shocks, the power is produced by burning of the fuel, and not by explosion.

No ignition system, carburetor, fuel mixer, etc., is required. On the basis of

der, which oil is completely burned through | and the cost of fuel per unit of power delivered.

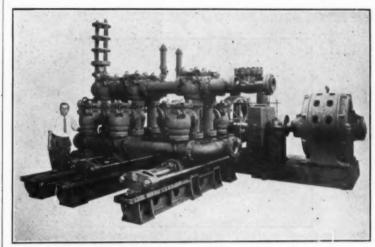
The results are given in the tables in the pamphlet, and the oil consumption per 100-kilowatt power was found to be less than 10 gallons through a wide range

#### Goulds Electric Pumps in Mines.

One of the largest electric motor-driven pump equipments ever built for unwatering a mine has just been installed in the two cents per gallon for crude oil, and El Oro Mining & Railway Co. of El Oro, lower chamber is fitted with a gate valve and the smaller one carries the water.

Mexico, by the Goulds Manufacturing Co., Seneca Falls, N. Y. This pump, as sho in the illustration, has a capacity of 500 gallons per minute. The construction is such that the pump can be readily dismantled and lowered into an ordinary mine shaft, and when assembled requires very little head room. The pump is in the bottom of the mine, and will work ber. The gate valve at top of the lower

similar to the one in the opening of the upper chamber. The air pressure in the upper chamber keeps the upper valve closed, and as the pressure in the upper chamber becomes equal to that already existing in the lower, the weight of the charge opens the lower valve downward and the charge drops into the lower chamagainst the head of 1300 feet. 'The driv- chamber is then closed by means of the



GOULDS PUMP FOR MINES.

ing motor is a Westinghouse 200-horse-| operating handle, and the air pressure power three-phase 50-cycle 440-volt motor, making 485 revolutions per minute. It is connected with double reduction gearing, giving 35 revolutions per minute to the crankshaft of the pump. The flexibility of this equipment permits it to be installed and operated in any desired location, and the installation affords an excellent illustration of the advantages of electric-driven pumps in mine service.

#### The "Cement Gun" in Construction Work.

The methods of mixing and applying cement in many forms of construction work seem destined to be revolutionized by the introduction of the "Cement Gun" into general use. This "gun" is a device for applying cement by compressed air, the dry cement and sand being forced through a hose and mixed with water introduced at the nozzle just before the cement leaves the hose. The wet mixture or cement mortar is directed by this nozzle

valve to upper chamber closed. This permits the pressure in the lower chamber to hold its gate valve or top door closed. and the pressure forces the "mix" out into the hose, through which the air passes at a high velocity due to the pressure system. of which it forms a part. The "mix" is agitated or loosened up in the lower part of the lower chamber just before it passes into the hose by means of an air motordriven feed wheel, which revolves horizontally and thus delivers small charges of the loose mix directly into the air current of the hose. It is driven through this hose to the point where the cement is to be applied. As it reaches the nozzle a fine spray of water from a smaller hose is forced by the ordinary city or other pressure into the midst of the stream of cement as it pours out the nozzle. This is effected by means of a sleeve over the cement nozzle, into which the end of the water hose directs the water. This sleeve guides the circle of spray into the cement

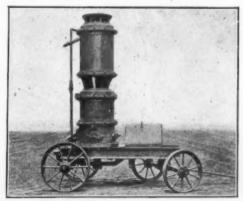


FIG. 1.-THE CEMENT GUN MOUNTED.

cement is applied.

This machine consists of two cylindrical chambers, as shown in Figs. 1 and 3 of the accompanying illustrations. A swinging gate valve operated by the handle shown extending from near the top of the upper cylinder admits the dry mixture of cement and sand. When the cylinder is charged sufficiently the air pressure of 30 nounds per square inch is admited to this upper chamber by means of a valve in the vertical pipe shown in Fig. 1. The

to the surface or location on which the stream as the mixture passes out. The stream of cement is continuous, and the charging or loading of the cement gun goes on as fast as the work demands. The upper chamber is ready for a new charge as soon as each charge drops into the lower chamber. The air compressor is shown in Fig. 2, and its function is simply to furnish compressed air at about 30 pounds per square inch to the hose system.

The method of applying the cement to the structure is shown in Fig. 8, in which the large hose carries the cement mixture

Sep

Rug

in Fig. 3.

The cement mortar impinges on the surface treated, and as it strikes with considerable force it makes a dense coating, all surplus water and air being forced out, giving a substantial construction, and when waterproof cement is used a thoroughly waterproof building construction results. The uses to which the cement gun may be applied are many, and new applications are constantly being found for it.

The air pressure system hose is also seen coating inside and outside of large steel water pipes, coating and waterproofing railroad tunnels, highway bridges, etc.; constructing water and sewer pipe flumes, for building walls, cement stucco and plaster work, covering old wooden buildings, walls and roofs, waterproofing cellars, building fences, sidewalks, etc. Complete fireproof buildings can be constructed by using special designs of framework. Colors can also be applied as required. "gun" is equally successful in applying

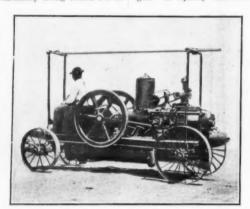


FIG. 2.-AIR-COMPRESSING OUTFIT.

It is now in use on the Panama Canal hydrated lime, gypsum, "Alca" lime and construction for coating the rock surface similar plastic materials in Culebra Cut to prevent disintegration Government work in Hawaii and the Phil-In constructing the ordnance shop and dwellings at the United States sand was applied. Triangular wire mesh was secured by staples to the studding of the structure, and this was backed up stucco finish. by heavy building paper so the wire mesh

Fig. 4 shows the application of a ceat and resulting slides. It is also in use on of cement to an old house. It is covered with wire mesh and the cement applied, making a new finish.

Fig. 5 shows a new residence of cement Army Post in Hawaii a mixture of one tile walls coated by the cement gun with part cement to two and one-half parts three-eighths-inch thickness of cement and sand, and one-eighth-inch surface of "Alca" lime, giving an attractive buff

Fig. 6 is that of an old frame house c

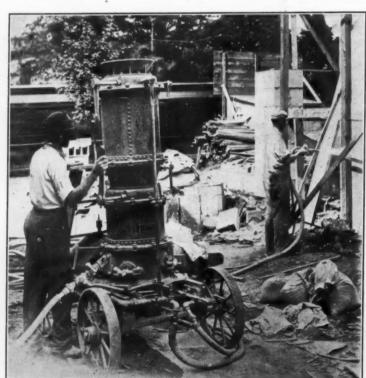


FIG. 3.—CEMENT GUN IN ACTION.

came in center of a one-and-one-quarter- ered with stucco and a finish of "Alea" inch thickness of cement when sprayed lime by the cement gun proce on. In the dwellings the cement was sprayed on three-quarter inch thick inside of studding. The framing of the buildings Philadelphia, and near Ridley Park. 25 supply the structural strength, the cement being required to maintain its own weight

The cement gun is applicable to founda-

The United States Home Building Co. is building at Folsom, Pa., 10 miles from dwellings, and have made plans to construct 850 buildings in all. The construction consists of the ordinary framing of a tion work and waterproofing below grade, house with studding, then two-ply tar coating steel to prevent corrosion, rust, paper is nailed over the studding. The value for general cement uses. and for retarding heat in case of fire; for cement gun applies seven-eighths inch of

one to three cement and sand, and this is Station, New York, have been materially finished with a coat of "Alca" lime—two aided by the use of the cement gun in parts lime to one part sand. This gives a coating the structural steel work. light, attractive cream color stucco. This construction is weatherproof, does not de- foot 3-inch siphons of the Catskill agne-

The two-inch cement lining of the 11-



FIG. 4.-OLD HOUSE BEING COATED BY CEMENT GUN PROCESS

teriorate with age, does not require paint- duct has been done by this gun and proing, and the cost compares favorably with nounced satisfactory by the responsible wood construction.

fessor Akeley of Chicago, for use in his ing Baltimore. It is expected that its use

engineers. This work was examined by The cement gun was invented by Pro- the water engineers of other cities, includ-



FIG. 5.-TILE WALLS FINISHED WITH CEMENT GUN.

taxidermist work on large animals, for wil expedite similar work to be done in filling in with gypsum, etc. Its applica- Baltimore. tion was so successful that he applied it to the recoating of the Field Museum, Building, Wilmington, controls the terri-

The Eastern Cement Gun Co., DuPont



FIG. 6.-OLD HOUSE MADE NEW BY CEMENT GUN.

Chicago, with which he was connected, torial rights of the "Cement Gun" process

and in this successful work it proved its in the Mddle Atlantic and New England States, with the exception of a few of the The improvements at the Grand Central large cities.

years. Rugg Rugg panyi loss o throu surfac bustic

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A survey of the machines which have tion, been made for drying and heating sand . The general arrangement of this plant prime mover in European countries. The

Ruggles-Coles Sand and Stone Dryer. the fuel being lost by exhaust and radia- resulted in the adoption in this country of This type of valve is shown in Fig. 1 of

the Lentz engine, for many years a leading



RUGGLES-COLES SAND AND STONE DRYER.

years. In the double-shell dryer of the Ruggles-Coles type, manufactured by the Ruggles-Coles Engineering Co., 50 Church street, New York, shown in the accompanying illustration, there is a minimum loss of heat by radiation, since the gases pass through the inner shell, then back through the space between, keeping the surface of the outer shell at a temperature of not over 100 degrees F. Efficient combustion is obtained because the gases pass over double the length of the shell, and consequently time is given for the gases to combine with the oxygen of the air.

In a test made on a Ruggles-Coles dryer used by an asphalt paving company for drying and heating sand and stone, they were not only dried, but raised to 404 degrees F., so that when they were mixed with the melted asphalt a proper

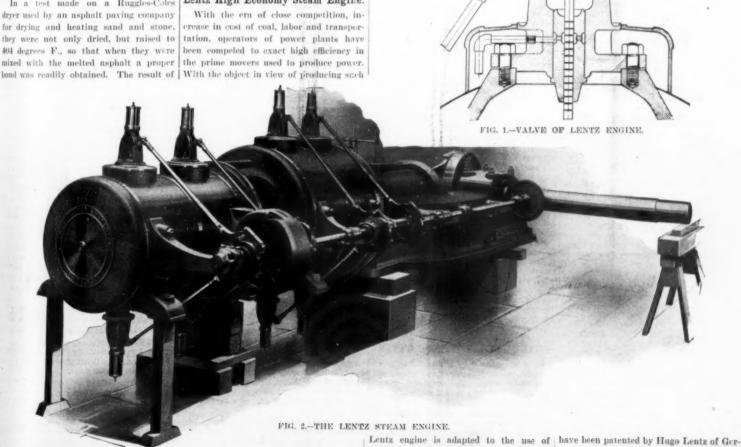
and stone shows that a remarkable devel-opment has been made in the last few the dryer by a bucket elevator and then taken by a second bucket elevator, as shown in the accompanying illustration, to an overhead bin. It is drawn from this bin into a mixer, where melted asphalt is mixed with it, then discharged into wagons and hauled to the work. This doubleshell dryer is reported to have shown high efficiency, to have given a large output and answered every requirement of this extensive piece of paving. The work done by the dryer was not only drying, but heating the sand to 404 degrees Fahr. ready to mix with melted asphalt.

#### Lentz High Economy Steam Engine.

the accompanying illustrations. It is found to remain tight without renairs. and engines fitted with the Lentz valve and gear, it is claimed, maintain their economy indefinitely.

The engine as shown in Fig. 2 is proportioned according to the best engineering practice. No elastic packing is used anywhere in the engine. The valves (Fig. 1) are of the double-seated poppet type, and the valve spindles are ground to fit in long bushings with water grooves, and no packing is used in the construction. The valve is so designed that it can stand any temperature or change of temperature without affecting its tightness. The valves are actuated by a cam working on a roller. When a valve comes to a valve seat the cam is disengaged, but the roller and cam are always in contact until the valve has been seated, consequently there is no noise, nor is there any ordinary limit to the revolutions at which the valve gear may be run. Along the side of the engine is a horizontal shaft from which the valves are driven, each valve being driven by an independent eccentric of small diameter.

The governor is simple in construction, but utilizes the inertia in a novel way, in consequence of which extreme sensitiveness and quickness of action are obtained. A hand wheel is provided to enable the engine speed to be regulated or changed while running. The details of this engine



cent., only 21.7 per cent. of the heat of Europe by the Eric City Iron Works have sults in high efficiency and reliability. the United States.

highly superheated steam, and utilizes many, and the Eric City Iron Works has poppet valves, a combination which re-

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# Construction Department

#### TO OUR READERS!

In order .o follow up properly the Construction Department items, please bear in mind the following

#### EXPLANATORY

The MANUFACTURERS RECORD seeks to "rify the Items reported in its Construction Department by full investigation. It is often impossible to do this before the Item must be printed or else lose its value as news, and in some Items it is found advisable to make statements as "it is reported" or "rumored," and not a positive information. If our statements as "it is reported and not as positive information. If our readers will note these points they will see the necessity of the discrimination. We are always glad to have our attention called to errors that may occur.

#### HOW TO ADDRESS

The name of one or more incorporators of newly incorporated enterprise should always be shown on letter addressed to the official headquarters or to the town of the parties sought, as may be shown in the ite Sometimes a communication merely address established company or enterprise cannot be delivered by the postmaster. By following these general directions the postoffice will be the postal authorities to deliver mail promptly, al-though it is inevitable that some failure by the postal authorities to deliver mail to new erns will occur.

#### WRITE PERSONAL LETTERS

In communicating with individuals and firms reported in these columns a letter writ ten specifically about the matter reported will receive better and quicker attention than a circular. In most instances a return postal card or addressed and stamped envelope should be enclosed with letter.

In correspondence relating to in-formation published in this depart-nent, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

The Daily Bulletin of the Manufacturers Hecord is published every busi-ness day in order to give the earliest possible news about new industrial, commercial, building, railroad and financial enterprises organized in the South and Southwest. It is invalu-able to manufacturers, contractors, engineers and all others who want to get in touch at the earliest moment with new undertakings, or the en-largement of established enterprises. The subscription price is \$25 per year. On all advertising contracts in Manufacturers Record for three months or longer a subscription to the Daily Bulletin is included for the

#### BRIDGES, CULVERTS, VIADUCTS

Ala., Eufaula.—Eufaula & Chattahoochie Valley Railroad Co., W. Lawrence Wild, secretary, Eufaula, will construct steel at Eufaula and one at Pittsview, Ala. onstruct steel bridge 'Machinery Wanted."

Ala., Pittsview.—Enfaula & Chattahoochie Valley Railroad Co., W. Lawrence Wild, sec-retary, Eufaula, Ala., will construct steel bridge, (See Ala., Eufaula.)

Fla., Cortez.—Cortez-Anna Maria district oted \$15,000 bond issue for construction of ridge to connect mainland and Gulf beach on the Key. Address Manatee County Com-missioners, Bradentown, Fig.

Ga., Blue Ridge.-Fannin County Commis awarded contract to Roanoke (Va.) Bridge Co. at \$1718 to construct bridge across Toccoa River; steel truss; 100-foot span; two reinforced concrete piers 23 feet above water; 12-foot driveway; county also con-templates construction of steel bridge beplates construction of steel bridge in Blue Ridge and Mineral Bluff and to ot steel-truss bridges across Fightin town Creek.

Ky., Madisonville.-Hopkins County Co contemplate bridge across Pond River.

Ky., Scottsville. — Allen County Commissioners awarded contract to Champion Bridge Co., Wilmington, O., to construct two teel bridges on Central Lincoln Rd., one ver Baysfork Creek and other over Little

tract to National Bridge Co., Daniel B. Lu-ton, president, Indianapolis, Ind., to con-struct reinforced concrete arches along right

Miss., Natchez.-Southern Railway & Navlgation Co., Howard Coles, general manager, Pullman Bidg., Chicago, III., will erect steel bridge (750 feet, bank to bank) on proposed 75-mile line from Natchez to Alexandria, La.

Mo., Kansas City.—Board of Public Works awarded contract to H. B. Thompson & Co. at \$20,492.50 to construct steel girder bridge across Blue River at Independence Ave.; con plers and abutments: cre

Mo., Kansas City.-Park Board approved plans for roadway on proposed viaduct to be built by Kansas City Terminal Co. over tracks at 19th St. and Flora Ave.; approach from viaduct to grade at 21st St. and Flora Ave. is to be protected on each side by re taining wall.

Mo., Lone Jack.-Jackson County Commis Mo., Lone Jack.—Jackson County Commis-sioners, Independence, Mo., awarded con-tracts aggregating \$37,000 for construction of stone and concrete bridges across roads near Lone Jack; Illinois Bridge Co. has contract for three, Midland Bridge Co. for two and Forrester Bros. Stone Co. for two structures.

Bartlesville. - Washington county will construct five bridges; bids received un til October 16; A. C. Ward, chairman County Commissioners. (See "Machinery Wanted.")

Shawnee. - Pottawatomie County Tecumseh Okla., awarded ontract to Sherman (Tex.)
700 to construct single-spa bridge across Canadian River.

Tenn., Chattanooga.—Hamilton county will onstruct six culverts; contract awarded to Bruce L. Freeman.

Tex., Aransas Pass.—Aransas Harbor Terminal Railway, C. S. Corrigan, chief engineer, San Antonio, Tex., will erect 500-foot trestie; drawbridge plate girder, 110-ton, 30-foot clear opening; on line from Aransas Pass to Port Aransas, Tex.

Tex., Dallas.-Dallas county will construct steel bridge; 60-foot span; 16-foot road; 10 tons capacity; bids opened September 23; George L. Fearn, County Auditor.

Tex., Fort Worth.-City contemplat n of bridge across Trinity River cost \$2,000,000; election will be called to vote Address The Mayor.

Tex., Houston.-City receives bids until November 20 for construction of two rein-forced concrete bridges over White Oak forced concrete bridges over White Oak Bayou and branch of White Oak Bayou on Houston Ave.; F. L. Dormant, City Engi-neer; H. B. Rice, Mayor; Recently men-tioned. (See "Machinery Wanted.")

#### CANNING AND PACKING PLANTS

Md., Baltimore.—Roberts Bros., 427 E. Lex-ngton St., contemplate erection of packing

Tex., Wichita Falls.—Bids will be received for excavation for cellars and construction of beef and pork-packing plant; two main buildings, each four stories and base parete and brick mill construction; about 000 brick to be required; no manded in this contract; specification drawings furnished on application. Address C. E. McSweeney of Wichita Falls.

#### CLAYWORKING PLANTS

Ala.. Rossland City (not a postoffice)-Chinaware, etc.—Rossland Development Co., Robert R. Zell, president, 326 Chamber of Commerce Bidg., Birmingham, Ala., arranged with parties to install plant at Rossland City to manufacture chinaware, mosaic tilwhich will be shipped to this plant. (Marion County, Ala., under "Mining.")

#### COAL MINES AND COKE OVENS

Ala., Birmingham. - Pratt Consolidated Coal Co., G. B. McCormack, president, will erect coal washer at Flat Creek coal mines; cost about \$25,000; contract awarded; construction begun.

Ala., Jasper.—American Coal Corporation Incorporated with \$5000 capital stock by Henry B. Gray, Walter Moore and W. C.

Kentucky.-United States Coal Paul Hardy, general manager, Holden, W. Va. (main offices 55 Congress St., Boston, Mass.), purchased 25,000 acres of coal land , purchased 25,000 acres of coal land ackberry Creek in Kentucky, and will

Ky., Nolansburg.—L. K. Rice, Middlesboro Ky., and Calvin Hurst, Pineville, Ky., or ganized company to develop 600 acres coa land near Nolansburg.

Tex., Como.—Como Coal Co. Increased capital stock from \$10,000 to \$20,000.

Va., Pennington Gap.—Gray Coal Co. In-corporated with \$10,000 capital stock; Joshua Burdett, president, Middlesboro, Ky.; R. H. vice-president: Robert Carson, secre tary, both of Pennington Gap.

W. Va., Big Creek.—Henrietta Pocahontas 'oal Co. incorporated with \$25,000 capital Stock by Chapman Betsford, English, W. Va.; Jesse Hackworth, Worth, W. Va.; Wyndan Stokes, Welch, W. Va., and others.

#### COTTON COMPRESSES AND GINS

Montgomery.—Planters' Cotton Oil l rebuild cotton gin; machinery pur-(Recently reported burned.)

Ga., Clarksville.—John Martin will erect two-story frame cotton gin recently noted; machinery to include 70-saw gin with feeder and condenser, single-box self-tramping cot-ton press with pulley drive; elevator; set of platform and one set of swinging scales. form and one set of so "Machinery Wanted.")

S. C., Sumter.—Crescent Fertilizer Co. In-orporated with \$100,000 capital stock by Chomas Wilson and others to gin cotton, nanufacture fertilizers, etc. (See "Fer-Thomas Wilson a manufacture ferti tilizer Factories.")

Beaumont. — Beaumont Ginning Co. incorporated with \$5000 capi stock by H. A. Pearlstein, William Saenger

rebuild plant burned at loss of \$17,000.

Tex., Hackberry.-Hackberry Gin & Mill Co. incorporated with \$2500 capital stock by Jacob Lorfing, Eugene Christine and Chas

Tex., Orange.-E. W. Brown will erect cotn gin; machinery purchase

Tex., Vanderbuilt.-Vanderbuilt Gin Co. incorporated with \$2400 capital stock by J. I Grant, C. C. Coleman and August Spreer.

#### COTTONSEED-OIL MILLS

Ala., Haleyville.—Haleyville Oil & Ferti-lizer Co. will open bids in March or April to erect two-press mill and fertilizer mixed cost \$40,000; H. O. Lovvorn, presiden W. Barber, vice-president; J. M. Ste secretary-treasurer; W. A. Lovelace, (Recently noted incorporated with \$50,-000 capital stock.)

Ky., Louisville.-Louisville Cotton Oil Co. increased capital stock from \$100,000

#### DRAINAGE AND IRRIGATION

Ark., Helena.-Welford White, secretary, ay be addressed for information relative to Beaver Bayou Drainage District's proposed work. (Bond issue of \$100,000 previously noted.)

Paragould.-Green and county drainage district awarded contract to Sherwood & Miller for drainage construction previously noted; A. C. Miller of Walnut Ridge, Ark., states that main ditch is 15½ miles long, 50 to 80-foot bottom, 2,000,000 cubic yards, 10-foot cut; 30 miles of laterals, 10 to 25-foot bottom, 1,000,000 cubic yards; entire cost \$260,000; two and one-half years required for completion, with three dredges; onstruction begun.

Ark., Pine Bluff.—Commissioners of drain-age district No. 3, Jefferson county, receive bids until 12 noon October 16 at office of Bridges & Wooldridge, attorneys, for canal construction recently noted; 8% miles main canal; 265,000 cubic yards excavation; maps, specifications, etc., at office of White & Watn, engineers, Pine Bluff. (See "Machinery Wanted.")

N. C., Dover.-Mosely Creek Drainage Dis trict will vote on \$42,000 drainage bond issue. Address District Commissioners

to 18 feet bottom, 6 feet deep, 11 miles long; to is rect bottom, 6 feet deep, 11 miles long; excavation, 115,000 yards dredge and 30,000 yards hand work; estimated cost, 319,000; plans not completed; survey completed by U. S. Department of Agriculture, Charleston, S. C., F. G. Eason, U. S. drainage engineer, in charge of South Carolina.

Dailas.-Trinity Valley Produce Co., Cinnebrew, president, awarded contra to Goode & McEnroe to construct seven n of levee around farm of 3265 acre believed around farm of 3.505 acres between Elm and West forks of Trinity River; lerge will be of earth, and will have average height of 7½ feet, with width at top of 4 feet and at bottom of 24 feet; cost about

Tex., Pharr.-Louisiana-Rio Grande Canal Co. increased capital stock from \$20,000 to \$650,000; main offices will be removed from McAllen, Tex., to Pharr,

#### ELECTRIC PLANTS

Ala., Pledmont.—City will vote October 18 on \$25,000 bond issue for construction of electric-light and power plant and enlargement of water-works. Address The Mayor

Ark., Clarksville.—City is having surveys made by Winters & Dove, Fort Smith, Ark., constructing electric-light preparatory to constructing plant. (See "Water-works.")

Ga., Americus.—Company will be incorporated with \$50,000 capital stock by Frank Lanier and Frank Sheffield to establish electric-light and gas plants; will furnish light, heat and power to Americus and surrounding territory.

Ga., Clarksville.-John Martin will not instal electric-light plant recently reported.

Ga., Jackson.—City voted \$12,000 bond issue or improving electric-light plant and waterworks. Address The Mayor.

Ga., Savannah.—Savannah Electric Co. will make improvements at Indian-street Station; equipment to be installed will consist of two boilers of 400 horse-power each, 500-kilov belted generator, 75-kilowatt generator e citer, etc.; work begun; cost about \$106,000.

Ky., Livermore.-Smith Cooperage Co. will nstruct power plant.

Ky., Versailles.—Kentucky Traction & Terminal Co., F. W. Bacon, vice-president, Lerington, Ky., awarded contract to Fred J. Rump of Versailles to erect combined electric substation and passenger and freight depot; brick; 35x86 feet; one story; electrical equipment will include rotary motor; Sargent & Lundy, Chicago Ill., are consulting engineers. (Company's main power plant, to be located at Lexington, recently described.)

Md., Whitehall.-Whitehall Manufacturi reported to have awarded contract to in I electric-light plant. (See "Miscellane ous Factories.")

Mo., Unionville.-City will reconstruct and extend electric-light and water systems: \$10,-000 of bonds issued; B. H. Bonfoey, Mayor

N. C., Nashville.—L. L. Davenport is pro-noting company to install electric-light clant to supply city. (See "Machinery moting

Okia., Collinsville.—City awarded contract at \$37,000 to C. A. Rees for construction of electric-light plant; plans call for three stands, three lights each, three stands to the block on Main St., and one are light at each crossing on other streets; Wm. M. Gresham, Clerk. (Bond issue recently noted.)

Okla., Wagoner.-City is having plans and specifications prepared by Benham Enginee ing Co., 714-716 Campbell Bidg., Oklahom City, Okla., for electric-light plant and etension of water-works; \$40,000 bonds issue

Tex., Commerce.-Commerce Ice & Power increased capital stock from \$35,000 to \$50,000.

Tex., Denton.—City will improve electric-light and power plant; will install generator and 300-h se-power engine; machinery pured at \$10,000.

Tex., Pittsburg.—F. E. Prince has municipal franchise for lighting streets; will construct electric-light plant.

Tex., Hearne.—City has plans by and awarded contract to O'Neil Engineering Co., Dallas, Tex., to construct electric-light plant and water-works; to include 35x50-foot brick power-house; 75 kilowatts capacity; cost 330,000; P. L. Brady, Mayor. (See "Water-works.")

rammell Creek.

Ala., Warrior.—Deans Ferry Coal Co. incorMo., Kansas City.—Kansas City.—Kansas City.—Clay porated with \$10,890 capital stock by Asa age district is proposed; 18,000 acres; canal 4 Light Co. incorporated by Charles A. Schraff

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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and others. (See "Ice and Cold-storage

Tex., Port Lavaca.-Port Lavaca Light, Ice & Power Co. will improve and enlarge plant.

(See "Ice and Cold-storage Plants.")

(See "Ice and Cold-storage Plants.")

Va., Roanoke.—Roanoke Street Railway & Electric Co. will build railway converter substation of 500 horse-power capacity at Mason's Creek; will transmit power from steam plant in Roanoke at pressure of 10,000 rolts and transform, by use of converter, into 50 volts to operate cars between Roanoke and Saiem; building will be of concrete and brick, one story, fireproof; cost, including machinery, \$15,000.

Va., West Point.—Town Council granted franchise to People's Light, Heat & Power Co. to construct and operate electric-light

#### FERTILIZER FACTORIES

Ala., Haleyville.—Haleyville Oil & Ferti-liser Co., W. A. Lovelace, manager, recently noted incorporated, will install fertilizer mixer, etc. (See "Cottonseed Oil Mills.")

mire, etc. (See "Cottonseed Oil Mills.")

Ala., Huntsville.—Farmers' Cotton Oil &
Fertilizer Co., Walter Kelly, manager, awarded contract to Baxter Bros., Huntsville, at
\$17,000 to erect grinding and acidulating
plant; Peter S. Gilchrist, engineer, Charlotte, N. C.; specifications for machinery
not yet determined. (Previously noted.)

Ga., Atlanta.—Paulaski Fertilizer Co. in-corporated with \$15,000 capital stock by Wal-ter S. Dillon, W. Owen Slate and others.

Ga., Cartersville.—Ladd Lime & Fertilizer Co. Incorporated with \$40,000 capital stock by Wilson M. Hardy and H. T. Reynolds (probably of Rome, Ga.) and Carl E. Haidy, (probably of Ro Berkeley, Cal.

Ga., Midville.-Central Fertilizer Co., (Ga., Midville.—Central Fertilizer Co., Jean A. Irwin, president, will expend \$135,000 on plant; will soon open proposals for erection of mill-construction buildings; machinery proposals should be addressed to Peter S. Gilchrist, Charlotte, N. C.; capacity of plant, 18,000 to 20,000 tons acid phosphate. (Recently noted.)

Ga., Thomasville. - Thomasville Fertilizer Ga., Thomasville. — Thomasville Fertilizer Co., B. H. Wright, president, purchased ma-chinery for plant; awarded contract to J. W. L. Yates to erect 100x156-foot ordinary-construction building; capacity of plant, 100 tons daily; J. W. Bell, secretary-treasurer. (Recently noted.)

S. C., Aiken.—Farmers' Storage & Fer-tilizer Co. will establish fertilizer plant. (Recently stated to increase capital stock to

8. C., Blenheim.-Blenheim Fertilizer Co. Incorporated with \$15,000 capital stock by John N. Drake, E. W. Evans, J. M. Napier, W. A. Rogers and C. C. Chamness.

S. C., Greenville.—Independent Guano Co. Incorporated with \$25,000 capital stock by Avery Patton and J. B. Bruce; will continue fertilizer plant on Broad St.

8. C., Greenville.—Harris & Willimon Company incorporated with \$5000 capital stock; John D. Harris, president; W. H. Willimon, vice-president and secretary. (Messrs. Harris and Willimon recently stated to establish guano factory.)

S. C., Sumter.—Crescent Fertilizer Co. in-corporated with \$160,000 capital stock by Thomas Wilson, G. A. Lemmon, C. G. Row-land and W. B. Wilson to manufacture fertilizers, gin cotton, etc.

#### FLOUR, FEED AND MEAL MILLS

Ark., Little Rock.—J. F. Weinmann Miling Co, incorporated with \$30,000 capital stock; J. F. Weinmann, president; R. T. Brook, vice-president; J. A. Weinmann, secretary.

Tex., Hackberry.—Hackberry Gin & Mill co. incorporated by Jacob Rorfing and thers. (See "Cotton Compresses and

Beaumont. - Beaumont Ginning & Milling Co. incorporated by H. A. Pearlstein and others. (See "Cotton Compresses and

#### FOUNDRY AND MACHINE PLANTS

Mo., St. Louis — Steel Castings. — Warren Steel Casting Co. Incorporated with \$12,000 capital stock by Charles E. Hayden, John A. Warren, William A. Kammerer, Patrick Cun-ningham and Lorenz Wittmann; will operate completed plant at Lynch and Dorcas Sts.

completed plant at Lynch and Dorcas Sts.

N. C., Burlington—Rotary Engines.—Holt
Engine Co. (recently noted) is proceeding
with construction of brick, metal-roofed
buildings to cost \$3800; will install lathes,
milling machines, pattern machinery, etc.;
John M. Cook, president; John R. Hoffman,
secretary; W. W. Brown, treasurer; Lafayette Holt, manager. (See "Machinery
Wanted.")

S. C., Greenville—Oil-mill Machinery, etc.—
American Machine & Manufacturing Co.,
Charlotte, N. C., leased mill-constructed
warehouse and will remove manufacturing
department to Greenville; purchased drawings, patterns, etc., of oil-mill machinery department of C. H. Bushnell Press Co. of
Thompsonville, Conn.; will manufacture
this equipment and continue to manufacture
waste-cleaning, textile, ice and refrigerating
machinery. (Recently noted to increase machinery. (Recently noted to increase capital stock to \$75,000.)

capital stock to \$75,000.)

Tenn., Memphis — Electrotype. — Southern Electrotype Co. will establish electrotype foundry at 144 N. Front St.

Tex., Eagle Pass—Pumps.—Compania Bemba Artesiana incorporated with \$15,000 capital stock by Oslę S. Harper, John S. Buckley and W. L. Lyman to manufacture patented double-action pump.

Va., Richmond—Stoves.—Richmond Stove Works will repair plant; cost about \$2500.

Works will repair plant; cost about \$2500.

W. Va., Clarksburg.—Edward J. Wood, architect, Lowndes Bidg., Clarksburg, states that date of receiving bids to erect foundry for Clarksburg Foundry & Casting Co. Las not been set. (Recent report incorrect.)

W. Va., Wheeling.—Wheeling Mold & Foundry Co., C. E. Blues, president, will increase motive power and install plant; contemplates increasing capital stock from \$250,000 to \$750,000.

#### GAS AND OIL DEVELOPMENTS

Ala., Birmingham.—Providence Oil & Gas | Fla., Fernandina Co., Frank Nelson, Jr., president, authorized | enlarge ice plant.

Okla., Tulsa.—Patria Oil Co. Incorporated with \$8000 capital stock by J. I. Gillispie, A. Miller Hammett, Daniel Hunt and others.

Okla., Okmulgee.—Boonville Oil & Gas Co. incorporated with \$10,000 capital stock by W. M. Cott, Eugene W. Gill, Mark L. Bo-zarth and others.

Tex., Houston.—Community Oil Co. incorporated with \$5,000 capital stock by George W. Collier, G. C. Wood and James L. Story.

Tex., New Castle. - Producers' Oil Co., Houston, Tex., leased 20,000 acres of land and will develop oil wells.

Tex., New Castle.—William Mowris Company, Tulsa, Okla., reported as securing leases on oil lands near New Castle and to undertake development.

W. Va., Parkersburg.—Revere Oil & Gas co. incorporated with \$40,000 capital stock by atrick McDonough, C. T. Dutton, T. J. Patrick McDon Garrity and others.

W. Va., Parkersburg.—Wolfe Farm Oil & Gas Co. organized with J. J. Shore, president, Parkersburg; W. W. Miller, vice-president, Parkersburg; J. P. Chapman, segretary-treasurer, Beury, W. Va.; will drill for oil in Ritchie county; drilling contracts let; company incorporated at \$25,000; Mr. Shore is general manager.

#### ICE AND COLD-STORAGE PLANTS

Fla., Fernandina.-McNair Lumber Co. will

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increase of capital stock to construct proposed pipe lines and sink gas wells. A dispatch to Manufacturers Record says: "Company increased capital stock from \$1,225,000 to \$2,500,000 and authorized issue of bonds, for \$1,500,000 for proposed construction of 74 miles pipe line between Birmingham and Fayette; contracts let to Featherlin-Sherman Company of Kansas and Weller Bros. of Huntington, W. Va., to sink 20 wells in Fayette county." In this connection Providence Oil & Gas Co. wires to Manufacturers Record: "Action referred to was preliminary," and suggests nothing definite to say yet.

La., Shreveport.—German capitalists have,

La., Shreveport.—German capitalists have, it is reported, closed negotiations for 42,000 acres of Caddo field oil land owned by Vivian Oil Co. and Rogers Oil Co.; land said to include 10 oil wells and 5000 acres land in proven district; purchase price rumored as nearly \$1,000,000.

La., Shreveport.—Robinson Oil Co. incorporated with \$25,000 capital stock by J. M. Robinson, S. Weiner, Jr., and others.

La., Shreveport.—Caddo Gas & Oil Co. will construct another six-inch gas main from Caddo gas field to Shreveport.

Okla., Pawhuska.—Homlny Creek Oil & Gas Co. Incorporated with \$100,000 capital stock by Charles B. Peters of Hominy, Okla.; Pierce Larkin, Enid, Okla., and G. N. eeland, Helena, Okla.

Okla., Tulsa.—Acme Oll Co. Incorporated with \$10,000 capital stock by Fred D. Oller, James E. Hodgson and R. M. Lee.

Okla., Tulsa. — Loa Oll Co. Incorporated with \$10,000 capital stock by Henry Steinberger, E. A. Ross and Henry N. Greis.

Okla., Tulsa.-Happy Oil Co. incorporated

Fla., St. Augustine,—Consumers' Ice Co: will be incorporated with \$40,000 capital stock to establish ice plant; A. E. Haya, president; S. E. Bennett, vice-president; R. C. Stephens, secretary; W. J. Sanches, treas-

Ga., Atlanta.—Atlantic Ice & Coal Corpo-ration contemplates extensive improvements to its plant. A correspondent wires to Man-ufacturers Record: "Atlantic Ice & Coal Cor-poration is reported to have appropriated \$560,000 for improvements and additions; in-crease capacity 150 tons per day additional; subsidiary storerooms." subsidiary storerooms."

Ga., Savannah.—South Atlantic Packing & Provision Co., W. S. Godley, president, will soon open bids to erect ice plant; ordinary construction; daily capacity 100 tons. (Reently noted.)

Ga., Waycross.—E. J. McAdam and associates will construct ice and cold-storage plant; capacity of ice plant, 100 tons daily; artesian well; cost about \$75,000; machinery contract awarded.

Ky., Lexington.—W. J. Loughbridge is con-ildering ereciton of ice factory.

Md., Arlington.—Z'mmerman Ice Co. in-corporated with \$50,000 capital stock by Wil-liam T. Childs (Main St.), George P. Zouch, T. Irwin Zimmerman and others. Md., Baltimore.—Swift & Co., Chicago, Ill.,

awarded contract to Consolidated Engineering Co., second floor Emerson Tower Bldg., Baltimore, to erect three-story reinforced concrete warehouse, to be equipped for refrigerating and cold-storage.

Mo., St. Louis.—Polar Wave Ice & Fuel Co. will build lee storage-house; brick; one and two stories; cost \$25,000.

with \$12,000 capital stock by C. J. Wright-man, A. E. Aggas and Ella Smith.

Okla., Tulsa.—Patria Oil Co. incorporated Oilver Ice, Coal & Mill Co.; will improve and enlarge.

N. C., Thomasville.—W. G. Minor, Chat-ham, Va., contemplates erection of ice plant; has not decided location and is open to propositions

S. C., Charleston.—Ice, Coal & Storage Co. incorporated with \$100,000 capital stock by Santo Sottile, James Sottile and M. P. Rivers.

Tex., Commerce.—Commerce Ice & Pov. Co. increased capital stock from \$35,000

Tex., Port Lavaca.—Port Lavaca Light, Ice & Power Co. will enlarge and improve plant; will enlarge building, improve ice, cold-sjorage and refrigerating departments and instal 125-horse-power Corliss engine.

Tex., Fort Stockton.-Fort Stockton Ice & Light Co. incorporated with \$35,000 capital stock by Charles A. Schraff, W. F. Zarback, James Rooney.

#### IRON AND STEEL PLANTS

Md., Sparrows Point — Iron Furnace.— Maryland Steel Co. has blown out iron furnace for repairs.

#### LAND DEVELOPMENTS

Ala., Birmingham.—Birmingham Facm Garden Co. Incorporated with \$4000 capital stock by B. T. White, C. H. Jenkins and E. L. McDonald.

to C., wishington.—wasnington City Real-ty Co. will develop 10 acres, extending from Canal to Conduit Rd., as suburb to be known as "White Haven;" will divide property into 190 lots and provide water, sewers, gas, elec-tric lights, etc.

Ga., Marshallville.—W. V. McCall, Florence, S. C., is interested in 1100 acres of land re-cently noted purchased at \$38,000 for division into small farms.

La., Metairie Ridge, P. O. New Orleans.— East End Realty Co. organized with Peter Buchler, president; Henry L. Zander, vice-president; Leo A. Marrero (probably of New Orleans), secretary; will develop suburb at Metairle Ridge.

La., Shreveport.—Southwestern Pecan & Horticultural Corporation No. 1 incorporated with \$105,000 capital stock to propagate all branches of horticulture, pecan, fig. orange or peach orchards, etc.; Elner R. Dick, president; E. T. Ireland, vice-president; W. T. Shipp, secretary; R. H. Muzzy, treasurer.

Miss., Tunica County.-James II. Barrett, Memphis, Tenn., purchased 4715 acres of land in Tunica county; will subdivide and cultivate cotton, corn and other agricultural

Mo., Louisiana.—Tilden Land Co. Incorporated with \$15,000 capital stock by E. H. McKnight, J. W. Luchett and A. J. Murphy.

McKnight, J. W. Luchett and A. J. Murphy.
N. C., Charlotte,—The Stephens Company
(George Stephens, J. S. Myers and associates) is proceeding with development of
Myers Park according to plans by John
Nolan, landscape architect, 1382 Harvard
Sq., Cambridge, Mass.; Brent Drane, local
engineer, is supervising laying out of streets;
main avenues will be 110 feet wide, providing for 40-foot roadway, with 14-foot sidewalk and 21 feet of planting space on each
side; suburb will eventually cover 1100 acres,
but company proposes to develop only 250
acres at present; plans call for number of
parks which are estimated to ultimately
comprise 250 acres.
N. C., Greensboro.—Alleghany Heights Co.

N. C., Greensboro -Alleghany Heights Co. N. C., Greenstoro.—Alleghany Heights Co. organized with 8. H. Hodgin president, Earle J. Harold vice-president and Herbert H. Nicholson secretary-treasurer; acquired 66 acres at Roaring Gap, on Blue Ridge Moun-tains, and will develop as summer resort. (Company recently reported incorporated with \$25,000 capital stock.)

with \$25,000 capital stock.)

N. C., Mt. Airy.—North Carolina Appie & Live-Stock Co., recently noted incorporated (under Asheville, N. C.) with \$125,000 capital stock, will develop 2000-acre tract in Surrey county near Mt. Airy; will set apple orchard in winter vurieties; plant peach trees, cultivate poulity and bees, also live-stock (Percheron breed of horses); A. W. Faulkner, vice-president, Asheville; J. C. Tebbetts, secretary-treasurer, Box 733, Asheville.

N. C., Wilmington.—Manhattan Company incorporated with \$100,000 capital stock by D. R. Foster, B. F. King, Jr., and Samuel Seigler, Jr.; purchased suburban property, and, it is reported, contemplates development.

sue for park improvements. Mayor. (Recently mentioned.)

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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Okla., Creta.-Creta Development Co. will develop townsite; has platted 700 town lots and graded streets; donated sites for public school, two churches, hotel and bank build-lng; J. C. Drew, president; M. F. Burks, vice-president; A. H. Davidson, secretarytreasurer. (Recently no with \$10,000 capital stock.) noted incorporated

Sand Springs Park porated with \$5000 capital stock by Charles Page, B. F. Rice and W. L. Wall.

C., Belton.-Belton Land Co. organized with W. R. Haynie, president; John A. Hor-ton, secretary-treasurer; will deal in real estate. (Recently noted incorporated with \$10,000 capital stock.)

S. C., Charleston,-Coastal Land Develop ment Co. Incorporated with \$25,000 capital stock by A. H. Latimer and H. M. Sanders.

S. C., Charleston.—Isle of Palms Development Co. Incorporated with \$50,000 capital stock; Julius D. Koster, president; Henry Schachte, vice-president; James Sottile, see retary-freasurer

Tex., Beaumont.-W. T. Jay, New Orleans La., purchased 515 lots in Arlington Addition. Benumont, at \$110,000; will im gton Blyd., making it 100 feet outh Beaun will imp construct sidewalks and curbings, extend sewer system, etc. C. M. Ives will be in

Va., Portsmouth.-Virginia-Yakir Co. incorporated with \$30,000 capital stock to cultivate orchards; Harry Lee Maynard, president: J. Davis Reed, vice-president; R.

W. Va., Blackberry City (not a postoffice). Blackberry, West Virginia & Kentucky Coal Co. (J. C. Miller, George S. Wallace and others), Huntington, W. Va., is interested in proposed development of new townsite ated between Matewan and Thacker, W. to be known as Blackberry City; Bow-Realty Co., Huntington, W. Va., will be in charge of real estate interests.

Va., Gerrardstown.—Eva-Mar Orch incorporated with \$5000 capital stock incorporated W. Martin, Willis F. Evans, A. G. Evans and others, all of Martinsburg, W. Va

W. Va., Moorefield.-Eureka Orchard will cultivate 143 acres of land in apple, pear and peach orchards; expenditure 900; H. L. Gamble, president; Flord P ono; H. L. Gamble, president; Floyd B. thias, secretary-treasurer. (Recently m incorporated with \$25,000 capital stock.)

#### LUMBER MANUFACTURING

Ala., Birmingham.-Norwood-Boyles Lum incorporated with \$10,000 capital stock; leased lumber yards and mills at East Birmingham; H. A. Speaker, president and treasurer; E. D. Speaker, vice-president and secretary.

Ark., Camden.—National Druggists' Syndi-cate, Thos. G. Beattie, president, 316 Unity Bldg., Chicago, III., purchased land contain-ing about 4,000,000 feet pine and 500,000 feet oak, etc. (See "Mining.")

Ga., Pierce County.—C. W. Caley of Richard, Va., and J. F. Joiner of Suffolk, Va., ecured leases on 50,000,000 feet of timber; lso purchased several thousand acres of land and propose development.

Ga., Whigham.—J. R. Munroe, Abbeville, Ga., and J. W. Belk, Whigham, are reportd to have purchased 20,000 acres timber land for development; cost \$200,000; will erect saw-mill and probably construct rallway from Whigham to Camilla or Albany via Newton.

La., East Carroll Parish.-Desha Lumber Co., South Bend, Ind., and Arkansas City Ark., purchased Penola Plantation in East parish, embracing 25,000 acres of cultivated land and 4000 acres hardwood timber land and will develop; estimated to cut 25,000,000 feet cypress, oak, ash, cottonwood and gum; company also owns 4000 acres ad-joining new purchase, and will construct logging road to Millikin, where band mill is in of construction.

La., Tioga.-Lee Lumber Co., S. R. Lee esident and general manager, will operate www mill about November 1; probably he aning mill ready for operation by Janua (Previously noted to rebuild 40x200-fo mill: wooden structure; cost within \$75,000.)

La., Monroe.-Advance Lumber Co., Cle O., purchased 11,000 acres of land Ouachita parish; cost \$50,000; reported to

Miss., Greenville.-Planters' ncorporated with \$30,000 capital stock by V. H. Neal and J. L. Strickland of Green-ille, and T. W. Starnes of Mathiston, Miss.

Miss., Jackson,-B. C. Godwin Lumber Co incorporated with \$10,000 capital stock by E. C. Godwin, Cyrus C. Warren and others. Miss., Laurel.-Richton Land & Development Co., Mobile, Ala., purchased 3200 acres timber land in Jones c

Miss., Philadelphia.-Union Lumb orporated with \$25,000 capital A. Brown, R. K. Dent and A. B. Carr.

Okia., Snyder. — Herring-Parsons Lumber o. will purchase C. T. Herring Co.'s lumber plant and continue established business: C. paint and commute established business; C. T. Herring, president; L. K. Johnson, vice president; S. W. Parsons, secretary; A. L. Cotton, treasurer. (Recently reported incorporated with \$15,000 capital stock.)

Aldridge.-Aldridge Lumb W. Aldridge, president (recently stated to rebuild burned sawmill), will install circular and band resaw: capacity, 100,000 feet per

Tex., Texas City.-Texas City Lumber Co. changed name to Buy Lumber Co. and in-creased capital stock from \$10,000 to \$20,000.

Tex., Houston.-Texas Land & Lumber Co., 3. Thornton, president (recently r incorporated with \$310,000 capits owns 5091 acres land estimated t 43,750,000 feet long-leaf yellow pin-27,000,000 feet white oak and 6,750,000 feet red gum, ash, blekory, etc.; will purchase and install mill (or mills) on Sabine River and at once install small mill to cut thabers and lumber for building plant and tenun-houses, and ties for road; make specialty of export and long length lumber and timber

Va., Craig County. — Washington Lumbe Co., 612-14 Colorado Bldg., Washington, D. C. organized with \$1,500,000 capital stock and president; is in Giles Virginia, including oak, and estimated to contain 100,000,000 feet: will install band mill on Norfolk & Western Rallroad; capacity 100,000 feet lum

W. Va. Beckley - Mankin & Crouch, Les Va., have not decided on plans for tent of timber recently noted pur

W. Va., Maynor.-G. F. & R. L. Stover Lumber Co. will rebuild burned sawmill.

W. Va., Parkersburg. — Diamond Lumber 'o. Incorporated with \$25,000 capital stock y E. M. Bonner and Lotta K. Bonner of Marietta, O.; William Rogers, E. R. Rogers can of Cowen. W. V.

#### METAL-WORKING PLANTS

Mo., St. Louis-Wire.-Ludlow-Saylor Wire Mo., St. Louis-Wire.—Laddow-Saylor Wire Co., William Duncan, president, 634 S. New-stead Ave., awarded contract to Kremer & Voirol, St. Louis, to erect machine shop; Voirol. roof construction; cost \$50 000; stein & Rathman, St. Louis.

Knoxville. - Hicks Sheet Metal Works purchased stock and machinery of G. R. Williams, and will conduct business at 1296 Grand Ave.; has building. (Recently noted organized by J. C. Hicks.)

#### MINING

Ala. Marion County - Kaolin -- Rossland ia., Marion County – Raoim.–Rossimu elopment Co., Robert R. Zell, president, Chamber of Commerce Bidg., Birming-n, Ala., purchased 1200 acres of kaolin lands in Marion county, containing approxipately 5.000,000 tons of knolin; will develop and arrange with parties at Rossland City to manufacture product into chinaware, mosaic tiling and enameled brick. (See Rossland City, Ala., under "Clayworking Plants,")

Ark., Camden-Clay.-National Druggists Syndicate. Thos. G. Beattie, president, Unity Bidg., Chicago, Ill., purchased acres land recently noted; will devel-early date; land contains about 4, feet pine and 500,000 feet oak, etc.; also urchased 1000 tains clay suitable for vitrified brick, tile and terra-cotta. (Previe planning organization of col \$250,000 capital stock.)

Ruddells-Silica.-J. R. Case. Ark., dent Arkansas Lime Co., contemplates velopment of silica deposit.

Ark., Smithville,-Lincoln Mining and Millociation, John R. Barnett, secretary and manager, is proceeding with development of 500 acres of zinc deposits in Law nty : cost of machinery (purcha

Md., Baltimore - Minerals and Metals -Danbury Mining Co. incorporated by George N. Rogers and Wm. F. Rogers, 606 American Bldg., and Lewis P. Winston, 1529 John St.

Mo., Buffalo—Lead and Zinc.—Mako Mining & Development Co., C. K. Holliday, president, Topeka, Kans., owns several hundred acres of land and leased several thousand; will develop lead and zinc deposits;

is sinking four shafts; no machinery needed present : E. N. Burr, manager,

Sarcoxie.-J. W. Boyd Mining C with \$50,000 capital stock W. Boyd, B. C. Burgess and Sam McFerren.

C., Newsom-Granite.-Winston-Salem Southbound Railway Co., E. B. Pleasants, chief engineer, Wilmington, N. C., purchased Ball Mountain, near Newsom, for \$12,000, and will install crushers and other machinery to make ballast for roadbed.

Okla., Creta.—Southwestern Quarry Co. in-orporated with \$500,000 capital stock to develop magnesia limestone quarrie to contain 5,000,000 cubic yards of limestone.

Van Horn-Mica.-Texas Mica Rottke, manager, Pecos, Tex., will open s January 1 to install mill of 120 tons hids capacity recently noted, and other machinery for development of 1280 acres of mica prorty; present daily output, one carload mica. (See "Machinery Wanted.")

W. Va., Sutton—Sand.—Holly Sand Co. In-orporated with \$10,000 capital stock by John D. Sutton, R. M. Cavendish, O. O. Sutton and others

#### MISCELLANEOUS CONSTRUCTION

Ark., Garland-Levee.-Miller County Levee District No. 2, N. II. Williamson, a Texarkana, Ark., will let contract for construction of 38 to 41 miles cently noted; to embrace 101,281.85 acres; be west bank of Red River at Texas State line and continue to one mile sou Garland; cost \$350,000; Arthur E. Me and L. L. Hidinger of Morgan Engine Memphis, Tenn., engineers in charge. (See "Machinery Wanted.")

Ark., Scanlan-Levee.-Duck Lake Outing purchased 800 acres of land containing 300-acre pond in Crittenden county, Ark-ansas, for \$20,000: proposes to build levee around lake to raise level of water three

La., New Orleans-Bulkhead,-Levee Board awarded contract to Doullut & Williams of New Orleans to construct pile bulkhead to protect levee from Egania to Alabo St., 1900

orpus Christi-Pier.-M. Little, Lan will construct pler 300 feet long. (See "Hotels.")

Va., Richmond-Wharf.-Council Co Finance recommended appropriation of \$25,000 for construction of wharf ing to plans prepared by Charles E. Bolling, City Engineer; wharf is to be 690 feet long and 16 feet wide, of wood and pile construction instead of concrete as previously deided.

#### MISCELLANEOUS ENTERPRISES

Ala., Birmingham - Poultry. - Pine Ridge Poultry Farm incorporated with \$5000 capital stock; William F. Fry, president and general manager; Walter B. Fowikes, vice-president; Frank H. Bell, secretary-treas-

Fla., Daytona-Garage.-E. L. Bond will ect garage; brick; metal roof; 26x90 feet. Fla., Tampa-Tug Boats.-Capt. H. C.

wards and Philip Shore organized tug company to operate on Hillsboro Bay Ga., Atlanta - Dealers, Erectors, etc.

Dunn Machinery Co., 54 Marietta St., will increase capital stock from \$25,000 to \$50,000.

Ga., Hahira – Live Stock, – Hahira Live Stock Co. incorporated with \$5000 capital stock by J. E. Webb, A. H. Vickers, T. W. stock by J. E. Webb, A Webb and J. W. Martin.

Ga., Lagrange — Poultry Farm. — Southern Poultry Farms has acquired 27 acres of land and will erect two 85x14-foot, two 40x12-foot and two 20x14-foot buildings and colony-houses; cost of all structures \$6000; W. L. Cleveland, president; H. H. Wadsworth, sec-retary and manager. (Recently noted or-

Ga., Macon-Automobile Garage.—Lamar-Glover Automobile Co. incorporated with \$12,000 capital stock; Henry J. Lamar, presi-dent; J. H. Glover, vice-president; W. A. secretary-treasurer; will occupy Blackmon, equipped garage at 221 2d st.

Ga., Macon-Cotton.-South poration organized with \$4,000,000 capital stock to control marketing of cotton crop of South; George D. Wadley of Bowling Br (P. O. Macon) is president; John T. V ley, secretary-treasurer, Waycross, Ga.

Ky., Elizabethtown.—J. W. Vardman o dizabethtown and William Ansbrack, Louis ville, Ky., will establish laundry; Hardin County Creamery and will install laundry equipment.

B. J. Hawes of Louisville for building : m or to be used for composition. stores; 10 apartments alm

Ky., Louisville-Grain Storage.-Kentucky Public Elevator Co. will erect 16 grain-storage tanks, each 87 feet high by 22 feet dlameter; reinforced concrete construction; cost

Ky., Paducah — ... uto & Machine Co. Paducah - Automobiles incorporated with & capital stock by F. M. Fisher, R. C. P. and W. F. Paxton.

La., Morgan City-Shipyard.-R. J. Terne. will establish shipyard; ma purchased.

La., New Orleans-Publishing.-Daily St. Publishing Co. filed mortgage coveri 000 bond issue for proposed improve plant, installation of additional ma

Md., Frederick-Hardware.-Ebert Hardware Co. Incorporated with \$30,000 capital stock Harry Ebert, Margaret M. Ebert and Jose Staley.

Sarshall Construction Co. incorporated \$59,000 capital stock by C. W. Marshall, J. L. Smith and E. H. Hovey. Kansas City-Garage.-Frank McDer.

mand will erect building; three stories ent; steel and concrete; ; leased by Bond Motor Co

Mo., De Soto-Gas Plants, etc.-Citiz Gas & Fuel Co. Incorporated with \$100,00 capital stock by John II. Gibbs, Albert J. Robus, Henry C. Duering, Joseph Stevens and Julius M. Klein; to deal in gas plants.

Mo., St. Louis-Printing.-E. E. Carrera g Co. Incorporated with \$5000 capital by Henry W. Carreras, Louis T. Carof St. Louis and Evaristo E, Carreras San Francisco, Cal.

Mo., St. Louis-Automobiles.-Cherokee Automobile Co. incorporated with \$2000 capital stock by William Paffrath, N. G. Sel and William Winkler.

Mo., St. Louis-Printing.-Father Dunne's Newsboys' Home, Harrison and Washington Aves., awarded contract to Frein Masonry & Contracting Co. of St. Louis to erect additional building for printing press, dormi tory, etc.: structure will be 62x128 feet: brick : cost about \$25,000.

Mo., St. Louis-Trade-marks,-National Reincorporated with \$30,000 a stock by W. W. Kay, W. J. Kennedy and d. E. Niedringhaus to register, manufacture and dispose of inventions and trade-marks.

N. C., Flat Rôck-Garage, etc.-George J. Baldwin, Savannah, Ga., has plans by F. J. Orr. Athens, Ga., for garage and stables

N. C., Rocky Mount-Publishing.-Teleram Publishing Co. incorporated by Henry Horne, J. L. Horne, Jr., and M. V. Barnhill N. C., Tarboro — Publishing. — Editions Co. incorporated with \$5000 Edgecor News Spencer P. Bass. W. H. Pittman nd H. R. Conger.

Okla., Collinsville - Publishing. Publishing Co. incorporated with \$5000 cm tal stock by J. D. Ward, D. L. Green a

Okla., Muskogee - Construction. - Muskog Construction Co. incorporated with \$20,000 capital stock by L. De Waard, J. O. Taylor and J. C. Warrick.

Okla., Tulsa - Printing. - Tulsa Prio. incorporated with \$96,000 capital by William Stryker, Walter Allen, A. F. Rob and others

S. C., Charleston-Garage,-Robinson Auto sobile Co., 174 King St. (recently noted in-orporated with \$20,000 capital stock), will corporated with \$20,000 capital stock), will install equipment for garage and repair shop; has building; J. T. Robinson, presi-dent and treasurer; B. F. Robinson, viceident and secretary. (See "Machinery

C. Gaffney-Garage.-Holmes Garage Co., B. A. Holmes, president, awarded con-tract to J. H. Curry and Alexander & Mooney to erect garage; 50x77 feet; brick; cost \$000. (N. II. Littlejohn recently noted to have ontract.

Tenn., Clifton.-Clifton & Tenness Packet Co. incorporated with \$5000 capital stock by T. S. Hassell, J. P. Morris, W. Δ. Hassell, A. J. Brile and J. W. Hassell.

Tenn., Lenoir City.—J. D. Wyrick. Broad-vay and A St., will establish laundry. (See Machinery Wanted.")

Tenn., Memphis-Automobile Supplies.-Oz-burn Automobile Supply Co. organized with burn Automobile Supply Co. organized with N. F. Ozburn, president and treasurer; W. laundry equipment.

Ky., Louisville—Publishing.—Baptist World
Publishing Co., is having plans prepared by

J. Shay, secretary and manager; will deal in automobile supplies. (Recently noted incorporated with \$15,000 capital stock.) 28, 1911.

with \$5000 G. Fisher

J. Terne

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Tenn., Memphis.—Chickasaw Motor Car Co. incorporated with \$25,000 capital stock by Carroll P. Cooper, Simpson T. Speers, J. W. Leftwich, N. Hill Martin and R. B. ding; main

Neblut.
Tenn., Morristown—Steam Laundry.—Morpistown Steam Laundry incorporated with
49,000 capital stock; Charles L. Parham,
president; J. B. Niell, vice-president; S.
ponald Williams, secretary, treasurer and
manager; plant established.

Tex., Dallas-Automobiles.-Overland Auto-Tex., Pathas—Automobiles.—Overtain Auto-nobile Co. incorporated with \$25,000 capital dock by W. W. Davis, D. T. Finley and F. M Bann

Tex., El Peso-Automobiles.-Rio Grande Tex., rst 1980—Automobiles.—Rio Grande Automobile Co. incorporated with \$5000 capi-tal stock by Max Moye, W. F. Carter, Jr., and John M. Wyatt.

Tex., El Paso-Garage.—Christy Auto Co. will creet commercial garage and machine shop; cost about \$100,000.

Tex., Houston-Coffee and Tea.-Southern Tea & Coffee Co. organized with E. L. Flow Tea & Conce Co. organized with E. L. Flow-res, president; D. E. Simmons, vice-presi-dent; T. C. Bonn, secretary-treasurer; will roast and deal in coffee, etc.; daily capacity 500 pounds. (Recently noted Incorporated with 45000 capital stock.)

Tex., Houston — Grain. — S. E. McAshen Grain Co. incorporated with \$10,000 capital stock by S. E. McAshen, S. A. McAshen and

Tex., Ore City, P. O. Graceton-Publishing, Ore City Publishing Co. Incorporated with \$5000 capital stock by L. T. Little, Harry T. Byers and L. S. Norman.

Tex., San Benito - Precooling. - Intermit-tent Vacuum Precooling Co. incorporated with \$50,000 capital stock by C. B. Rodgers, S. A. Robertson and J. H. Elliott.

Tex., Sweetwater — Laundry.— Sweetwater Laundry to. will operate established plant; B. T. Owens, president and manager; Harry C. Hughes, vice-president; B. Anthony, secretary-treasurer. (Recently reported incorporated with \$10,000 capital stock.)

Tex., Waxahachie—Printing.—Herald Printing & Publishing Co. Incorporated with \$10,000 capital stock by John P. Cooper, Lee P. Quaite and Amzi Carothers.

Va., Norfolk—Creosoting Plant.—Atlartic Creosoting & Wood Preserving Works award-ed contracts for repairs to plant reported burned; contemplates resuming operations

erect building for printing plant and offices: erect billding for printing plant and offices; freproof; 79 feet 6 Inches by 82 feet 9 Inches; four steries and basement, or 69 feet above curb line; brick, steel and concrete; con-tract is exclusive of lighting and heating; electric light; plans by Ferguson, Calrow & Taylor of Richmond; contractor will receive bids on all work except structural steel.

Va., Richmond — Motor Transfer. — Motor Truck Co. incorporated with \$25,000 capital stock; H. A. Gillis, president and freasurer, 78 Home Life Bidg.; Charles Laurens, vice-president, and T. M. Garrity, secretary, all of Washington, D. C.

W. Va., Clarksburg-Construction.-Eagle Construction Co. Incorporated with \$25,000 capital stock by H. Wirt Stuck, John F. Kearns, William Mount and others.

W. Va., Charleston — Building. — Kanawha Building Co. Incorporated with \$30,000 capital stock by Joseph Ruffner, Bradford Noyes, A. S. Alexander and others.

W. Va., Huntington — Publishing. — Swan Printing Co. awarded contract to Moore Con-struction Co., Charleston, W. Va., to erect printing plant; brick; three stories; cost

W. Va., Huntington - Publishing. - Swan Printing & Stationery Co., Frank P. Swan, president, awarded contract to Moore Construction Co., Charleston, W. Va., to erect printing plant; 30x200 feet; two stories and basement: fireproof construction; cost \$25, 666; plans by V. T. Ritler, Huntington, W. Va. (Recently noted.)

#### MISCELLANEOUS FACTORIES

Ala., Mobile—Plastering.—Monahan Plasering Co. incorporated with \$2000 capital tock by John J. Monahan, J. Monaha han, Jr., and J. R. Ennis.

Ala., Mobile-Chemicals,-G. F. & B. Chen leal Co. incorporated with \$100,000 capital stock by W. F. Gooden, George Full and

Ark., Little Rock-Water Distillation,-Anderson Company, 925 College St., will install additional machinery; capacity 100 to 150 gallons distilled water per hour. (See "Ma-chinery Wanted.")

Fla., Jacksonville - Brooms. - Merchants' Fla., Jacksonville — Brooms. — Merchants' Broom Co., Willet Groover, secretary-treas-urer, will erect factory recently noted; 40x 100 feet, with L 40x40 feet; also warehouse 40x150 feet; one story; reinforced concrete or ironclad; desires correspondence with contractors. (See "Machinery Wanted.")

Ga., Americus—Gas.—Company will be in-corporated with \$50,000 capital stock by Frank Lanier and Frank Sheffield; will es-tablish gas plant. (See "Electric Plants.")

Ga., Atlanta-Pain(s.-Paragon Oil Co. or-ganized with \$12,000 capital stock by J. H. Ewing, A. J. Taylor, F. A. Pittman and

Ga., Atlanta-Medicine.—Clonts Medicine Co. Incorporated with \$25,000 capital steck by J. J. Clonts, H. K. Clonts, T. A. Clorts and T. A. Abercrombie.

and T. A. Abercrombie.

Ga., Dublin—Gas Plant.—Citizens will organize company to construct street rallway and illuminating gas plant. Address R. M. Martin, managing director, Chamber of Commerce. (See "Machinery Wanted.")

Ga., St. Mary's—Turpentine, etc.—Gulf Pine Product Co. of Waycross, Ga., is proceeding with construction of retorts to have daily capacity of 60 cords of wood; products in-clude turpentine, pine tar, pine oil and resin; main office, etc., to be removed to Jacksen-ville. Fig.

ville, Fla.

La., New Orleans—Window Shades and Fringe.—Alcus-Patterson Shade Manufacturing Co. incorporated with \$20,000 capital stock; Richard S. Alcus, president; Charles H. Patterson, vice-president.

La., New Orleans—Molasses.—Dunbar Molasses Co. incorporated with \$500,000 capital stock by George H. Dunbar, James V. Dunbar, George W. Dunbar and others.

La., Shreveport – Rail Joints. – Humason Rail Joint Co. organized with \$200,000 capital stock to manufacture device invented by G. A. Humason to prevent wrecks by spread-ing rails; J. C. Willis, president; C. P. Munday, secretary.

Munday, secretary.

Md., Baltimore—Cable Railway System.—
International Cable Railway, 405 American
Bldg., South and Baltimore Sts., contemplates erecting factory near city to manufacture parts for cable railway systems;
II, S. Robinson, president; H. D. Bush, vicepresident; Eugene II. Ober, secretary, and
II. H. Arthur, treasurer.

Md., Baltimore-Brooms,-Maryland Scho for the Blind, Paca and Fayette Sts., will enlarge broom-making department; George W. Conner, manager, will supervise work.

Md., Baltimore—Pad.—Phoenix Pad Manus facturing Co. Incorporated with \$50,000 capi-tal stock by Garnett Y. Clark, 1009 Calvert Bidg.; Wm. Milnes Maloy and T. Howard Embert, 836-840 Equitable Bidg.

Md., Baltimore—Spar Products.—New Spar Products Co. Incorporated with \$700,000 capital stock by William Leopold (1816 W. North Ave.) and A. J. Redfar, both of Baltimore, and James McNabb, Washington, D. C., to treat fats, oils, etc.

Md., Hagerstown-Heating and Lighting Apparatus, etc.—Gasco Burner Co. Incorporated with \$6000 capital stock by Marshall M. Milton, Frank L. Richer, Charles B. Davis and others.

Md., Rocky Ridge—Medicines, Drugs, etc. Valentine Manufacturing Co. Incorporated with \$75,000 capital stock by Ellsworth C. Valentine of Rocky Ridge, Doran E. Albaugh, Detour, Md., and Roszell J. Bowen (Bowen, Sunderland & Co.), 311 S. Charles St., Baltimore, Md.

Md. Whitehall—Paper.—Whitehall Manufacturing Co. acquired paper mills at Whitehall, and will practically rebuild; present plans contemplate crection of main building, 200x46 feet, and several smaller structures for storage and other purposes; equipment will include two paper-making machines, one 66-inch and one 44-inch, which will give mill daily capacity of about 25 tons finished product; in addition to regular equipment, it is Md., Whitehall-Paper,-Whitehall Manu daily capacity of about 25 tons unished product; in addition to regular equipment, it is reported that contracts have been let for installation of electric-light plant to furnish power and light for mill and nearby buildings; F. M. Rudolph will be superintendent.

Mississippi — Cotton Cleaners. — James G. Dickson, Little Rock, Ark., president of Didn Manufacturing Co. (recently noted incorporated with \$300,000 capital stock under "Cotton Compresses and Gins"), states his company will not build gins and compresses, but will manufacture cotton-cleaning attachment for saw dins. ment for saw gins.

Mo., Kansas City—Automatic Signals.— International Automatic Signal Co. Incorporated with \$1,000,000 capital stock by C. II. Carson, Louis B. Leach and York Burges

by Elton D. Wheeler, Burt T. Cubine and T.

Mo., St. Louis-Electrical Supplies.—Wagner Electric Manufacturing Co. increased capital stock from \$1,200,000 to \$1,500,000.

Mo., 8t. Louis—Novelties.—Curiew Novelty Co. incorporated with \$10,000 capital stock by Samuel Curtis, Archibald Lewis and Ed-ward T. Klippel.

Mo., St. Louis-Shoes.-Non-Royalty Sh Mo., St. Louis—Shoes.—Non-Royalty Shoe Co. organized with \$100,000 capital stock by Roberts, Johnson & Rand Shoe Co. and other shoe companies in St. Louis, Chicago, Detroit and other cities; plans to establish shoe factory in St. Louis; W. F. Elroy of Hamilton-Brown Shoe Co. will be in charge of building and equipping plant. (Previously mentioned.)

N. C., Greensboro — Automobile Tires.— Charles M. Lea and F. W. Donelly contem-plate establishment of automobile-tire factory.

Automobile Co. incorporated with \$10,000 capital stock; J. T. Robinson, president and treasurer; B. F. Robinson, vice-president and secretary.

Tenn., Memphis—Gum.—H. E. Winterton Jum Co. increased capital stock from \$20,000

Tex., Beaumont,-Magnolia Petroleum Co. Calveston. Tex., will, it is reported, increase capacity of oil refinery; has begun construc-tion of eight-inch discharge pipe to extend from Delphia to Sabine Pass.

Tex., Cleburne-Automobiles.-II, E. Luck is interested in establishment of automobile factory.

Tex., Houston.—Southern Kola Manufac-turing Co, Incorporated with \$18,000 capital stock by John Richa, W. F. Ames and Thos.

Tex., Houston-Coffee,-Guatemala Coffee 'o. increased capital stock from \$15,000 to

Va., Floyd.-Brake Lever.-American Brake Lever Co. incorporated with 315,000 capital steck; V. M. Sowder, president; R. F. Tomp-kins, vice-president; S. R. Brame, general manager; J. R. Peterman, secretary and treasurer.

Va., Blackstone-Overalls.-Jobbers' Overall Manufacturing Co. changed name to J bers' Overall Co. and increased capital st from \$10,000 to \$50,000.

Va., Lynchburg — Mattresses.— National Mattress Co., W. T. McNamara, Jr., general manager, will rebuild factory reported burned; plans not determined.

burned; plans not determined.
Va., Richmond—Coal Briquetting.—Virginia
Coal Briquetting Co. incorporated with \$100.600 capital stock; T. M. Carrington, president; R. H. Smith, vice-president; P. S.
Plumber, secretary-treasurer; will establish
plant to manufacture coal briquettes.

Va., Richmond — Aeroplanes. — Virginia Aerial Manufacturing Co. Incorporated with \$100,000 capital stock; John C. Hagan, president; James D. Patton, vice-president, and A. Langstaff Johnston, secretary and treasurer; has rented building and will manufacture automatic aeroplanes and deal in aerial

supplies.

W. Va., Huntington — Overalls. — Peerless
Overall Co., C. W. Watts, president (recently
noted Incorporated with \$25,000 capital
stock), removed plant from Middleport, O.,
to Huntington; has full equipment of ma-

W. Va., Kenova—Chemicals.—Basic Products Co. will remodel chemical works, erect additional buildings and instal new machin-ery; construction begun.

W. Va., Middlebourne-Gas.-Middleb

W. Va., Moundsourne—Gas.—Middlebourne Gas & Water Co. organized by Mentor Het-zer. (See "Water-works.") W. Va., Moundsville—Skirts.—Kraft Manu-facturing Co. is considering enlargement of

skirt factory.

W. Va., Moundsville—Brake Shoes.—Safety
Manufacturing Co. awarded contract to Batson & Burton, Moundsville, to erect building; mill construction; daily capacity, 2000
brake shoes; J. H. Young, president; C. M.
Truschell, vice-president; F. A. O'Brien,
secretary treasurer. (Recently noted incorporated with \$75,000 capital stock.)

#### RAILWAY SHOPS, TERMINALS, ROUNDHOUSES, ETC.

Ark., Heber.—Missouri & North Arkansas Raliroad, E. M. Wise, general manager, Eureka Springs, Ark., will, It is reported, erect railroad shops.

orated with \$1,000,000 capital stock by C. II.
Carson, Louis B. Leach and York Burgess.

Mo., Kansas City.—W. & C. Manufacturing
Co. incorporated with \$25,000 capital stock

Mo. aron, Louis B. Leach and York Burgess.

Wilmington, N. C., awarded contract, it is reported, to John Vaughn of Thomasville to engineer Topographical Survey Commission,

erect shop, construct 1000 yards of concret-ing, installation of S5-foot electric turntable, etc. (Company recently reported to expend \$80,000 for improvements.)

N. C., Spencer.—Southern Railway, B. Her-man, chief engineer, 1309 Pennsylvania Ave., Washington, D. C., will, it is reported, erect roundhouse and transfer sheds; roundhouse will be of brick

Tex., Pecos.—Pecos Valley Southern Rail-way Co., L. W. Anderson, chief engineer, is proceeding with construction of repair shop recently noted; 40x100 feet; frame and concrete; construction by company's force; L. M. Schwab of Pecos, engineer in charge; will install air compressor, lathe, drill press, bolt cutter, etc. (See "Machinery Wanted.")

#### ROAD AND STREET WORK

Ala., Clayton.—Barbour County Board of Revenue employed J. D. Slyhart, civil eagi-neer, to survey road through Barbour county and estimate cost of improving.

Ala., Elba.—Coffee county voted \$100,000 bond issue for road construction. Address County Commissioners.

Ala., Gadsden,—City Council passed ordi-nance providing for sidewalks, curbs and gutters on 5th, Bay and 3d Sts.; cost \$4100; Charles L. Marsh, City Engineer.

Ala., Moulton.—Lawrence county will grade, drain and surface with Tishomiago grayel about 1½ miles of Hillsboro-Moulton Rd.; bids received until October 20; W. E. Hotchkiss, resident engineer, Courtland, Hotchkiss, resident engineer, Courtland Ala.; W. S. Keller, State Highway Engineer (See "Machinery Wanted.")

Ala., Palatka.—City Council, Benjamin I. Gay, president, will construct seven miles of vitrified brick pavement (laid flat), 16 to 24 feet wide; granite or cement curb; also three miles hard surface or gravel, 12 feet wide; no curb; bids opened October 3; C. S. Stallings, City Engineer; recently noted. (See "Machinery Wanted.")

Ark., Pine Bluff.—City will construct concrete sidewalks on Fourth and Sixth Aves., Main, Georgia, Pine and other streets; bids received until September 28; A. C. Jordan, chairman Board of Public Affairs: W. A. Lee, clerk.

Lee, clerk.

Fla., Gainesville.—City will vote October
10 on \$35,000 bond issue for paving streets
with vitrified brick. Address The Mayor.

Fla., Bartow.—Polk county will vote October 10 on \$500,000 bond issue for road construction. Address County Commissioners.

Fig., Jacksonville,—City awarded contract to Mattier & Young to pave Duval county road from School road to Duval station with clay macadam gravel.

Fla., Jacksonville.—Duval County Commis-sioners have ordered cutting of right-of-way and grading proposed roadway from point at or near East Mayport to ocean jetties; to be paid from proceeds derived from \$1,000,000

bond issue,
Fla., Jacksonville.—City awarded contract
to Engineering & Paving Co., Jacksonville,
to construct 23,268 yards of vitrified brick
paving at \$1.58 per square yard; sand foundation; Philip Prioleau, City Engineer. (Engineering & Paving Co. recently noted as
lowest bidders.)

Ky., Pineville,—F. A. Heath, City Clerk, may be addressed relative to issuance of \$15,000 of bonds for completion of streets. (Recently noted.)

La., New Orleans.-City will surface with concreting clay gravel Howard Ave. from Claiborne Ave. to Broad St.; bids received until October 2; Charles R. Kennedy, Comp-troller. (See "Machinery Wanted.")

troller. (See "Machinery Wanted.")

La., Shreveport.—Southern Bithulithic Co.,
Nashville, Tenn. (recently noted as receiving contract), will pave 14 streets; cost about
\$150,000; Geo. R. Wilson, City Engineer.

La., St. Bernard Parish.—Highways Department, Board of State Engineers, Room
104 New Orleans Court Bidg., awarded contract to Marcel Garsaud, New Orleans, La.,
at \$12,637.60 to construct shell road in St.
Bernard parish from Tocca Settlement three
miles toward Reggio; bids for 17½ miles
earth-surfaced road in East Carroll Parish
were rejected; new bids for this work and
also for 12-mile earth road in Franklin parish will be received until October 10; Gervais Lombard, acting State Highway Engineer. (Call for bids lately noted.)

Md., Baltimore.—Board of Awards awarded

Md., Baltimore.—Board of Awards awarded contract to Consolidated Euginering Co., second floor Emerson Tower Bidg., Bulti-more, at \$3545.50 to pave Cokesbury Ave. from Adams St. to point 300 feet northward with vitrified block. (Call for bids lately

Md., Baltimore.-Joseph W. Shirley, chief

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City Hall Annex, submitted report on construction of proposed boulevard along Green Spring Ave. within city limits; plan includes parkway varying in width from 116 to 150 feet; estimated cost \$130,000.

Md., Cumberland.—City Commission awarded contract to Brady Bros., Frostburg, Md., at \$1485.90 to pave 4th St. and at \$1835.90 to pave Ann St.; to Le Fevre & Edwards at \$3739 for concrete curb and at \$3779.30 for stone curb on Laing Ave.; Ward M. Eichelberger, Commissioner of Streets and Public Property. (Recently noted.)

Md., Upper Marlboro. — Prince George's county will grade and macadamize one mile of Queen Chapel Rd. between District Line and Hyattsville; County Commissioners will receive bids until October 3; Henry St. J. Briscoe, Clerk. (See "Machinery Wanted.")

Miss., Jackson.—City will pave West Capitol St. from Lemon to Magnolia St.; estimated cost \$50,000 to \$60,000; City Council instructed City Engineer to prepare plans and Street Commissioners to invite bids.

Miss., Laurel.—City will pave principal streets. Address The Mayor,

Mo., Forsyth.—Taney county voted September 23 on \$15,000 bond issue for road improvements. Address County Commissioners.

Mo., Fulton.—Fulton road district voted \$100,000 bond Issue for road Improvements. Address District Commissioners. (Recently noted.)

Mo., Sedalia.—Pettis county will construct 3½ miles of rock road; bids received until October 9; contracts for seven additional miles will be let later. Address County Commissioners. (See "Machinery Wanted.")

N. C., Statesville.—Iredell county will construct about 17 miles of road; contract for grading will be awarded October 1; N. B. Mills, chairman. (See "Machinery Wanted.")

N. C., Pittsboro.—City will grade streets and construct concrete sidewalks under supervision of Spence Taylor.

Okla., Tulsa.—Board of Commissioners received bids and will let contracts September 29 for paving 139 blocks (9.43 miles); 128 asphalt blocks; balance brick; work to be commenced at once; engineer's estimate of cost \$531,070; E. B. Cline, City Auditor. (Recently noted.)

Okla., Tulsa.—Tulsa county voted \$500,000 bond issue for road improvements in Road District No. 1; this will make available more than \$656,000 to build 120 miles of highway contemplated, including macadam with asphalt-filled surface, clay with asphalt surface, and macadam and oil; first stretch of road to extend north and south for 35 miles, this to be intersected at Tulsa by east and west highway; N. L. Sanders, chairman Board of County Commissioners. (Recently mentioned.)

8. C., Charleston.—City will relay vitrified brick roadway on Rutledge Ave. from Spring to near Sumter St.; about 8700 square yards; bids opened September 25; J. H. Dingle, City Engineer.

S. C., Columbia.—City awarded contract to Atlantic Bitulithic Co., Richmond, Va., for construction of driveways around Statehouse. (Recently noted.)

S. C., Marion.—Marion county will construct 100 miles of sand-clay road; Road and Highway Commission will award contract in sections of five miles and over.—(See "Machinery Wanted.")

S. C., Sumter.—Sumter county defeated \$150,000 band issue for road construction recently noted; J. R. Sumter, clerk.

Tenn., Charlotte.—Dickson County Turnpike Co. organized with \$20,000 capital stock by E. H. Stone, Cumberland Furnace, Tenn., and others; contemplates constructing 15 miles of road, beginning at Stayton, passing through Charlotte and terminating at Dickson.

Tenn., Covington.—Tipton county will vote Septemebr 30 on \$300,000 bond issue for road improvements. Address Road Commission-

Tenn., Memphis.—Shelby county will construct road embankment through Nonconnah Creek bottom on Capleville, Mount Moriah and White Station Rds.; bids opened September 25; J. L. Coopwood, T. W. Powell and others, committee; George Richardson, County Engineer.

Tenn., Memphis.—City awarded contract to J. W. Johnson at \$23,860.10 for paving Iowa Ave. between S. Main and S. 3d St.; George C. Love, Commissioner of Streets.

Tenn., Nashville.—City will construct additional granitoid curbing and sidewalk on portion of McGavock, Troost, Claiborne, East Belmont and Scott Sts. Address The Mayor.

Tenn., Park, R Station Knoxville.-City

awarded contract to E. W. Gillespie of Knoxville for macadamizing south side of Magnolia Ave., and to Lawson Irving of Knoxville for grading; cost about \$7500; contract for paving on north side of avenue will soon be awarded; T. S. Dooley, Mayor. (City recently stated to expend \$15,000 for street improvements.)

Tenn., Whiteville.—City voted \$10,000 hond issue for sidewalks. Address The Mayor.

Tex., Dallas. — Continental Construction Co., 334 Wilson Bidg., Dallas (recently noted as receiving contract from 8th Street Improvement League), states work includes about 50,000 to 60,000 square feet of sidewalk and 10,000 to 12,000 linear feet curb and gutter. (See "Machinery Wanted.")

Tex., Huntsville.—Walker County Commissioners and Good Roads Association are having survey and plat made by J. G. Brown, Houston, Tex., of 75 miles of roadway leading out of Huntsville for improvements.

Tex., Port Arthur.—City contemplates various street improvements costing about \$300,000; planned to pave 5th, 6th and 7th 8ts, from Houston Ave. to Stilwell Blvd., about one mile, with mudshell and asphalt; also each of 14 avenues intersecting, totaling about 94 blocks or nearly 7 miles, and Proctor St. with asphalt, brick or wood blocks for 7 blocks through business section and continuing 20 blocks with shell and asphalt; sidewalks are to be paved with cement. Address The Mayor.

Tex., Franklin.—Commissioners' Precinct No. 3 of Robertson county contemplates voting on \$190,000 bond issue for road construction. Address County Commissioners.

Tex., Sanderson.—Terrell county will receive bids until November 13 for construction of 1540 linear feet concrete curbing or wall, about 200 cubic yards, to be 2½ feet high at base and 1 foot wide on top; also 200 cubic yards rock wall to straighten and increase width of road and 60 cubic yards rock curb on side of road; 300 cubic yards dirt filling back of wall to level; 180 cubic yards of rock blasted off bluff on upper side of road and removed to widen road, and sufficient culverts to carry water underground cross road; J. B. Ross, County Judge. (See "Machinery Wanted.")

Tex., Waco.—City will issue \$50,000 street improvement bonds. Address The Mayor.

Va., Norfolk.—Finance committee approved ordinance appropriating \$5200 for paving, curbing, etc., extension of Freemason St. to connect with W. Falkland St.; W. T. Brooke, City Engineer.

Va., Richmond.—State Highway Commission will receive bids until October 7 for grading and graveling about one mile of road near Chickahominy River on Creighton Rd., in Henrico county; P. St. J. Wilson, State Highway Commissioner. (See "Machinery Wanted.")

W. Va., Cameron.—City voted \$5000 bond issue for paving. Address The Mayor.

W. Va., Hinton.—Greenbrier district, Summers county, voted \$50,000 bond issue for road improvements. Address County Compilestoners

#### SEWER CONSTRUCTION

Ark., Clarksville.—City is having surveys made by Winters & Dove, Fort Smith, Ark., preparatory to constructing sewer system. (See "Water-works.")

Ark., Little Rock.—Commissioners Sewer District No. 68 will construct sewer system; invites bids until October 10.

Fla., Hastings.—City is considering construction of storm and sanitary sewer systems. Address The Mayor.

Ky., Harlan.—Town will construct 1400 feet vitrified pipe sewer on Central 8t. from Central and 3d 8ts. to Cumberland River; sewer consists of 250 feet 12-inch, 250 feet 15-inch, 900 feet of 18-inch pipe and 25 feet concrete in river; bids received until September 20; R. A. Baker, chairman Board of Trustees. (See "Machinery Wanted.")

Ky., Winchester.—City will extend sewers on First Ave., Jefferson, Georgia and Highland Sts. Address The Mayor.

La., Lake Charles.—Southwestern Asphalt Construction Co., Memphis, Tenn., is lowest bidder at about \$125,000 for construction of sewer system; Walter G. Kirkpatrick, Jackson, Miss., is engineer. (Call for bids lately noted.)

La., Lake Charles.—City awarded contract to Southern Asphalt & Construction Co., Birmingham, Ala., at \$98,979.97 to construct sewer system; contracts for septic tanks, pumps and engine and castings also awarded; Walter G. Kirkpatrick, Jackson, Miss., is engineer. (Call for bids lately noted.)

Ga., Statesboro.-City will not vote on

sewer bond issue recently noted until after July, 1912; J. A. McDougald, Mayor.

Md., Baltimore.—Board of Awards, City Hall, awarded contract at \$3193.55 to W. H. and C. F. Thompson, 628 Law Bldg., Baltimore, to construct sanitary lateral sewer in alley east of Park Heights Ave. between Third and Fourth Aves.

Md., Baltimore.—Board of Awards, City Hall, awarded contract to W. H. & C. F. Thompson, 628 Law Bldg., Baltimore, at \$95,733.75 to construct high-level interceptor in ylcinity of Read and St. Paul Sts.

Miss., Lexington.—City receives bids until October 13 for sewer system recently mentioned; 5½ miles 6 to 12-inch pipe sewers; W. G. Kirkpatrick, engineer, Jackson, Miss. (See "Machinery Wanted.")

Mo., Montgomery.—City awarded contract to William McClurkin, St. Louis, Mo., cost \$5590, to construct sanitary sewers; will require 5500 feet of 8-inch vitrified clay pipe; Fuller-Coult Company, Chemical Bidg., St. Louis, Mo., engineer in charge; bond issue of \$29,000 voted for sewers and water-works. (Recently mentioned.)

Mo., St. Louis.—City will receive bids until October 6 for construction of Rock Creek Joint District sewer, first section. Address Board of Public Improvements. (See "Machinery Wanted.")

Okla., McAlester.—City awarded contract to John W. Rooks of McAlester to construct 5300 feet of sewer in District No. 26, Second ward.

S. C., Timminsville,—City awarded con tract to George W. Waring, Columbia, S. C. to extend sewer system and sewage-disposaplant; contract price, \$9143; J. Newton Johnston, engineer, Florence, S. C. (Recently noted.)

Tenn., St. Elmo.—City voted \$80,000 bend issue for construction of system of sanitary and storm-water sewers; bond issue will complete fund of \$100,000; W. G. M. Thomas, (Commissioner of Election. (Recently mentioned.)

Tenn., Somerville.—City will construct about three miles sewer; cost \$10,000; bonds voted; engineer not selected; work to be contracted; E. A. Maddox, Mayor.

Tex., Bay City.—City will vote in about 30 days on \$20,000 bond issue to construct sewer system. Address The Mayor. (Recently noted.)

Tex., Dallas.—City will construct storm sewers on Pennsylvania, Warren or Belle and Colonial Aves. from Forest Ave. to Whittaker St; 15-inch vitrified pipe to 80-inch plain concrete pipe; bids received until October 6; J. B. Winslett, City Secretary. (See "Machinery Wanted.")

Tex., Fort Worth.—City awarded contract to Tarrant Construction Co., Fort Worth, to construct portion of Rosedale-Magnolia storm sever recently mentioned; W. J. Estes, City Secretary.

Tex., Nogalus.—City voted \$175,000 bond issue for construction of sewer system and water-works, Address The Mayor.

Tex., Waco.—City will issue \$45,000 sanitary sewer and \$35,000 storm-water sewer bonds. Address The Mayor.

Va., Pulaski.—City Council contemplates construction of sewerage system; J. L. Ludlow, Winston-Salem, N. C., probably will be engineer.

#### TELEPHONE SYSTEMS

Ark., Little Rock.—Southwestern Telephone & Telegraph Co., Dallas, Tex., purchased Tri-State Telegraph & Telephone Co.'s lines in northeastern part of Arkansas and will make improvements, including erection of two-story brick exchange buildings at Osceola and Blytheville, Ark.

Md., Emmitsburg. — Emmitsburg Pioneer Telephone Co. organized to construct telephone system; George J. Zimmerman, president; C. F. Smith, secretary, and J. F. Tooper, treasurer.

Miss., Laurel.—Jones County Rural Telephone Co. will construct telephone system; wires to be underground; franchise granted.

Mo., Springfield. — Ozark Bell Telephone Co. will construct copper circuit telephone system from Springfield to Memphis, Tenn., giving direct communication with Springfield, St. Louis, Kansas City and Memphis; cost about \$100,000.

Okla., Caney.—Oklahoma Rural Telephone Co. Incorporated with \$10,000 capital stock by A. H. Utley, Caney; J. W. Craig, McAlester, Okla., and Z. Du Pies, Coalgate, Okla.

Okla., Keota.—Keota Telephone Co. incorporated with \$5000 capital stock by R. N. Robinson, R. A. Bonham, H. D. Price and H. D. Price, Jr.

S. C., Manning.-Clarendon Telephone Co.

incorporated with \$5000 capital atock; Abe Levi, president; H. J. Harby, vice-president; Robert Shelor, secretary-treasurer.

Tex., Marlin.-J. B. Earle, Waco, Tex., has municipal franchise to construct telephone avatem.

Tex., Fort Stockton.—Pecos & Rio Grand Telephone Co. Incorporated with \$129.00 capital stock by James Rooney, Mart Adams and Frank Rooney.

and Frank Kooney.

W. Va., Kenova.—People's Telephone Co. or.
ganized with Rheuban Osborn, president;
W. W. Smith, secretary, and W. P. Harrig,
treasurer; will construct telephone system,
(Recently stated to have secured 30-year
franchise.)

#### TEXTILE MILLS

Ga., Barnesville — Cotton Yarns. — Aldera Mills awarded contract to Pike Bros. of Lagrange, Ga., to erect two-story loom shed; brick construction; cost about \$18,000; plans by F. D. Milstead of Atlanta, Ga. (This company recently mentioned as to expend about \$150,000 for enlargement and additional equipment.)

Ga., Rome — Cotton Duck, etc. — Anchor Duck Mills will erect additional building 80x100 feet; brick construction; three stries; also erect 10 cottages for operative; building contracts awarded to J. F. Dupree & Son of Rome; building and equipment to cost about \$40,000.

Mo., St. Louis—Bleaching and Finishing Plant.—Continental Converting Co. incorporated with \$100,000 capital stock by Walter H. Carter (American Hotel), O. M. Hill and T. A. Meyers; will establish bleaching and finishing plant for textile products. (Latdy noted.)

N. C., Cherryville—Sheetings.—Vivian Cotton Mill will, it is reported, issue \$33,000 of preferred stock.

N. C., Hildebran — Cotton Yarns.—Henry River Manufacturing Co. will increase capi tal stock from \$125,000 to \$225,000.

N. C., Newton-Hosiery.—Fidelity Hosiery Mills Co. will erect two-story brick structure 50x100 feet and equip for manufacturing hosiery; construction probably to begin in spring; will install at once additional knitting machines for fine goods.

S. C., Orangeburg—Cotton Yarns.—Orange Cotton Mills will, it is reported, install new machinery to replace portion of present equipment.

#### WATER-POWER DEVELOPMENTS

Ga., Atlanta.—Georgia Railway & Power Co. (Intely mentioned as applying for charter with capital stock of \$27,000,000) will take over Georgia Railway & Electric Co. (Iacluding securities of Atlanta Gas Light Co. and Steam Heat & Power Co.), Atlanta Water & Electric Co., Atlanta Hydro-Electric Co. and Georgia Power Co.; will operate plants completed and enlarge them as required in future; continue to completion various water-power developments acquired and build auxiliary steam plants to supplement electrical power in time of low water; distribute electricity for light and power larger cities of Piedmont section, including Rome, Dalton, Cartersville, Elberton and Hartwell; have 300 miles of steel transmission line on steel towers and ultimately distribute over 200,000 horse-power; Georgia Power Co. now developing 100,000 will be isvested and for which contracts have been awarded; various properties acquired are stated to have a total capitalization of \$35.-233,600, and new company plans to issue bonds and additional stock after organisation; new company financed mainly by Canadian and English capital; C. Elmer Smith, York, Pa., is president of Georgia Power Co. and C. O. Leng, 71 Broadway, New York, is engineer in charge. (Other details herefore reported.)

#### WATER-WORKS

Ala., Pledmont.—City will vote October 33 on \$25,000 bond issue for enlargement of water-works and construction of electric and power plant. Address The Mayor.

Ark., Clarksville.—City is having survers made by Winters & Dove, Fort Smith, Ark., preparatory to constructing water-works, electric plant and sewerage system. (Previously mentioned.)

Ala., Mobile.—City contemplates extension of water mains from Tennessee and Ann Sisalong Baitimore St. to Washington Ave.; C. W. Soost, superintendent of water-works, will prepare estimates.

Fig., Gainesville.—City will vote Octobs 10 on \$40,000 bond issue to improve waterworks. Address The Mayor. (Recently mestioned.) stock; Abe Fia., Hampton.-C. J. Weeks has arranged Fig., Hampton.-C. 3. Weeks mis arranged to furnish town with artesian water; G. C. Livingston & Co. of Hampton have contract to lay three-inch galvanized mains, etc.; e-brest

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President; P. Harris, one system, red 30-year

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Ga. Clarksville.—John Martin has franchise and will organize company with \$10,000 capital stock to construct water-works recently noted; 50,000 gallons capacity; cost about \$10,000; will require four and six-inch cast-iron piping, pump 75 gallons capacity and gasoline engine. (See "Machinery Wanted.") work begun.

Ga., Jackson.—City voted \$12,000 bond i on, por improving water-works and electric-light lant. Address The Mayor.

Md., Cumberland.—Evitts Creek Water Co.

Md., Cumberland.—Evites Creek Water Co. incorporated with Thomas Footer, president, and D. D. Lidley Sloan, secretary; will be in charge of constructing dam and supplying water from Evitts Creek, about 9 miles from city; J. H. Fuertes of New AGE prepared plans. (City's plans to increase water supply at cost of about \$500,000 previously detailed.)

ing, Del., will construct and operate water-works; town will rent water for fire hydrants.

nydrants.

Miss., Lexington.—City receives bids until October 18 for recently-noted water-works system; two artesian wells, reservoir, steel tank and tower, pumps, bollers, about 6 miles mains, hydrants, etc.; W. G. Kirkpatrick, engineer, Jackson, Miss. (See "Machinery Wanted.")

Mo., Maryville.—S. G. Gillam, secretary Board of Public Works, may be addressed relative to \$100,000 bond issue recently re-ported voted to purchase established waterorks or construct new system.

Mo., Montgomery.—City awarded contract to James A. Pringle, Kansas City, Mo., at \$11,787 to construct water-works; will re-quire 2848 feet of six-inch cast-iron pipe; Fuler-Coult Company, Chemical Bidg., St. Louis, Mo., engineer in charge; bond issue of \$20,000 voted for water-works and sewers. (Recently mentioned.)

Mo., Pacific.—City engaged Fuller-Coult Company, Chemical Bidg., St. Louis, Mo., to prepare plans for water-works; 380,000 gallons capacity; to include 75,000-gallon coreie reservoir; date of opening bids not set; cost about \$15,000; A. Kuppitz, Mayor. (Bond issue of \$15,000 recently noted voted.)

Mo., Unionville.—City will reconstruct and extend water-works and electric-light sysextend water-works and electric-light sys-tems; \$10,000 of bonds issued; B. H. Bonfoey, Mayor.

N. C., Weldon.—City voted \$40,000 bond issue for water-works; Board of Commissioners will meet October 2 to consider plans, etc.; W. W. Wiggins, Mayor. (Recently

Okla., Clinton.—City voted \$30,000 bond issue for artesian wells. Address The Mayor. (Recently mentioned.)

Okla., McAlester.—City awarded contract to Bennett & Rooks of McAlester at \$41,240.39 to construct dam at watershed; W. P. Halli-day, City Engineer. (Recently mentioned.)

Okla., Wagoner.—City is having plans and specifications prepared by Benham Engineering Co., 744-716 Campbell Bldg., Oklahoma City, Okla., for extension of water-works and for electric-light plant; \$40,000 bonds

Okla., Walter.—City will expend \$6500 to extend water-works; work by local labor; Ray Wallace, Mayor. (Bond issue of \$6500 recently reported voted.)

Okla., Wakita.—Town will vote October 2 on water-works bond issue. Address Town Clerk.

8. C., Aiken.-City awarded contract erect pumphouse; contract for bollers will be awarded separately. (Contract to lay piping recently reported awarded to Guild & Co. of Chattanooga, Tenn., at \$13,098.)

S. C., Johnston.—Town will vote on \$20,000 and issue for water-works. Address Town

8. C., Johnston.—City will vote October 0 on \$20,000 bond issue for water-works. Ad dress The Mayor.

Tenn., Dayton.—C. D. Sanborn, Mayor, states engineer has not been chosen for water-works construction recently noted; Bond Commission, Euclid Waterhouse, secretary-treasurer, is ready to negotiate with civil engineer; \$25,000 bond issue. (Previous notices partially incorrect.)

Tex., Hearne.-City will expend \$30,000 to erect apartment-house; cost \$6000.

construct water-works and electric-light plant; plans and construction by O'Neil En-gineering Co., supervising and constructing engineer, Dallas, Tex.; material and equip-ment for water-works purchased; P. L. Brady, Mayor. (Recently noted.)

Tex., Orange.—City will vote October 2 on \$50,000 water-works bond issue. Address The Mayor

Tex., Nogalus.—City voted \$175,000 bond issue for construction of water-works and sewer system. Address The Mayor.

Tex., Paris.-City awarded contract to W. E. Tomerlin to drill deep well at city lake; Edward H. McChristian, Mayor. (City re-cently stated to raise and strengthen pres-ent earth dam, sink deep well and install deep-well pump or air compressor at cost of \$20,000.)

Tex., Tenaha.-S. A. McDaniel has chise to construct water-works to cost \$5000; date of opening blds not set. (Commercial Club recently noted interested.)

W. Va., Cameron.—City voted \$5000 bond issue for water-works. Address The Mayor W. Va., Grafton.—City will construct water system; engineer not employed; \$90,000 bond issue recently noted voted; W. C. Hanway, clerk. (See "Machinery Wanted.)

W. Va., Middlebourne.—Middlebourne Gas & Water Co. incorporated with \$10,000 capital stock by Newton Hetzer, J. A. Boyd and S. G. Pyle; will build \$7000 plant.

W. Va., Wheeling. — Board of Control awarded contract to W. J. McClain to construct water system on S. Belmont St. and Edgehill Addition; also awarded contract pipe and fittings.

W. Va., Wheeling.—City and Elm Grove Railroad Co. will have preliminary plans and report made by Chester & Fleming, engi-neers, Pittsburg, Pa., for extension of water

#### WOODWORKING PLANTS

Ala., Gadsden-Sash and Doors.-Southern Manufacturing Co. will rebuild sash and door plant previously reported burned; fire-proof construction.

Ga., Valdosta-Cooperage.-Valdosta Coop erage Co. will erect cooperage plant; construction begun; L. M. Pennington, propri-

Ky., Louisville.-Norman Woodworking Co. will erect planing-mill. (Company recently reported with \$25,000 capital stock by A. E. Norman and others.)

Ky., Pikeville-Staves.-W. F. Windell contemplates erecting stave mill.

N. C., Rocky Mount—Sashes, etc.—Rocky Mount Sash & Blind Co. will rebuild plant recently reported burned.

Tex., Bay City-Handles.-Haas & Sons. Sherman, Tex., will establish handle fac-

Tex., Huntsville.-C. G. Barnett will, it is reported, erect woodworking plant.

Va., Altavista — Furniture. — Consolidated Furniture Works, A. T. Quick, president, awarded contract to A. K. Loftin & Sons, Altavista, to erect addition to furniture works; machinery mainly supplied. (Recently noted.)

Va., Swetnam-Staves,-C. E. Brown, R. F. D. No. 1, will establish plant to manufacture slack-barrel staves. (See "Machinery

#### BURNED

Ark., McDaniel. - Naylor & Allen Company's cotton gin.

Ga., Atlanta. — Skinner Transfer Co.'s building, loss \$10,000; Hyman Bros.' store, loss \$5000; Southern Iron & Paper Stock Co.'s building, loss \$10,000; J. Goldberg Fur-niture Co.'s store, loss \$5000.

Ga., Culloden.-Ingram & Haygood's cotton

Ga., Lagrange.-J. H. Rouse's planing mill;

Ga., Macon.-Cottonseed warehouse of \$3000.

Procter & Gamble Manufacturing Co. of store and apartment building. Cincinnati, O., occupied by McCaw Manufacturing Co.; loss \$25,600.

Ga., Marshallville.-Rab Barrow's cotton

Go., Savannah.-J. H. Smoak's store on Augusta Rd.

Ky., Louisville.-David Baird & Son's store at 511-13 W. Main St.; loss on building, owned by Wilder estate, \$70,000.

Md., Easton.—Dwelling owned by Lewis ascault and occupied by Bertram Slaughter.

Md., Kings Valley, R. F. D. from Germantown.—Distillery owned by John R. Lewis; loss about \$5000.

Miss., Greenville.-Holly-Mathews Manufacturing Co.'s box factory, warehouse and office building; loss \$65,000.

Miss., Indianola. - Indianola Cotton Oil

N. C., Elizabeth City.-D. W. Davle & Sons' ensi-cola plant.

N. C., Misenheimer.-George Reed's store; loss about \$6000; Marvin Ritchie's residence. Okla., Foraker.-Methodist Church; loss 5000. Address The Pastor, Methodist \$5000.

Okla., Tulsa.-Methodist Episcopal church;

8. C., Bamberg.-Decania Dowling's sawmill and cotton gin: loss \$25,000.

S. C., Charleston.-Etiwan Fertilizer Co.'s plant: loss \$50,000.

C., Greenwood.-B. O. Frick's residence on Monument St.

Tenn., Memphis.-W. M. Able's planing mill at 967 Trigg Ave.; loss \$2500.

Tenn., Watertown. - D. L. Smith's residence; loss \$7000.

Tex., Brenham .- S. S. Clay's cotton gin

Tex., Clevenger.—J. P. Clevenger's saw and planing mill; loss about \$10,000.

Tex., Cooper.-James Patterson's building ; Cooper Morning Herald's printing plant; First National Bank's store building; Craw-ford-Norris-Stevens Company's store; W. M. Parkhill's building, etc.

Tex., Dallas .- J. Q. Holman & Co.'s buildings; loss \$7500.

Tex., Devine.—Morris & Son's store, loss \$12,000; Adams National Bank Bldg., loss \$6000; Kercheville, Reason & Winters' build-Ing. loss \$5000.

Tex., Ennis.-Twin Thicket Gin Co.'s plant, perated by Charles Sutton

Tex., Fort Worth.-H. H. Pittman's store; oss \$7000.

Tex., Georgetown. - Farmers' Gin Co.'s plant: loss \$17,000.

Tex., Houston.—A. J. Vick's three residences; loss \$5000.

Tex., Jacksonville.-Henry Chapman's cot ton gin: loss \$2500.

Tex., Italy.—Farmers' Gin Co.'s cotton gin; estimated loss \$16,500. Tex., Mexia.-Munger Oil & Cotton Co.'s cotton gin; loss \$10,000.

Tex., Plano.-J. H. Hutten's residence;

Va., Front Royal.-Adams Furniture Co.'s

store: loss \$8000. Tex., Teague.-Teague Gin Co.'s cotton gin: loss about \$4500.

Tex., Whitney.—Farmers' Union cottonseed warehouse; loss about \$5000.

Va., Lynchburg.-National Manufacturing Co.'s mattress factory: loss \$25,000.

Va., Bondtown.-O. L. Cyphers' store buildings, loss \$5000; Porter Bros.' two buildings, loss \$3000.

Va., Bluemont .- Dr. John Cline's residence; loss about \$5000.

Va., Norfolk.-Atlantic Creosoting & Wood Preserving Co.'s plant damaged; loss about \$10,000.

Va., Richmond. -- Richmond Stove Co.'s plant at 2501 E. Main St. damaged; loss

# BUILDING NEWS

#### BUILDINGS PROPOSED

#### APARTMENT-HOUSES

APARTMENT-HOUSES

Ga., Atlanta.—William Moore Realty Co. will erect bachelor apartment-house at Cone and Walton Sts.; nine stories; 40x100 feet; fireproof; 100 rooms; cost \$100,000; plans by alr compressors at South Side water-works plant; awarded contract at \$6966; W. D. Davis, Mayor.

Ga., Brunswick.-Mrs. Thomas Lloyd will | \$2300.

Ky., Louisville.—Baptist World Publishing Co. is having plans prepared by B. J. Hawes, Louisville, for apartment building, etc.; to contain 10 apartments. (See "Miscellaneous Enterprises.")

Mo., Kansas City.-W. G. Tull will erect apartment-house; brick; cost \$5000.

Mo., Kansas City.—A. E. Mosler will erect apartment-house at Armour Blvd. and Wyzndotte St. : eight stories : cost \$100,000.

Mo., St. Louis.—Victor Diesing will expend about \$100,000 to erect flats or apartment

Mo., St. Louis.-Hillside Real Estate & Investment Co, will expend \$40,000 to erect apactments and brick bungalows.

Mo., St. Louis.-Zentner-Kissell A. Co. will rect two tenement-houses; two stories; cost

#### ASSOCIATION AND FRATERNAL

Ga., Waycross.—Loyal Order of Moose, J. E. Phelan, dictator, will not erect lodge building as recently reported.

Miss., Vicksburg.—Hyland Lodge, Ancient, Free and Accepted Masons, approved plans or lodge building; concrete construction.

Tex., Austin.-Young Men's Christian So-lety begun campaign to raise \$15,000 to erect clety beg building.

Tex., Cuero.-Sons of Hermann will probably erect lodge building.

Va., Bedford City.—Trustees of National Elks' Home are receiving bids to erect pro-posed home to replace present structure; cost about \$260,000.

Va., Roanoke.—Roanoke Aerie No. 813, Fra-ternal Order of Eagles, will erect lodge building; two stories, basement and roof garden; brick; marble trimmings; verandas on front and side; cost \$35,090; plans by Huggins & Bates, Roanoke.

W. Va., Grafton.—Young Men's Christian Association will expend \$25,000 to remodel and enlarge building; ordinary construc-tion; steam heat; plans by Glesey & Faris, Wheeling, W. Va. (Recently noted.)

#### 31357 BANK AND OFFICE

Ala., Mobile.—City Bank & Trust Co. is having plans prepared by George B. Rogers, Van Antwerp Bidg., Mobile, for fireproof bank and office building; 52x115 feet; six or more stories; corridors on each floor to con-nect with corresponding corridors of present structure; elevators; will probably remodel lobby of present building; cost \$250,000 to \$300,000

Ga., Crawford.-Farmers' Bank of Crawford, L. O. Benton, president, Crawford Mercantile Co. Bidg., will erect bank building.

Ga., Lovett.-Farmers' State Bank, C. R. Williams, president, will erect bank building Ga., Waycross,-First National Bank will let contract soon to erect two-story addition to office building.

Ga., Waycross.—Bunn Bros. will erect fire-proof office building; 100x110 feet; five sto-ries and basement; ateam heat; electric lighting; cement sidewalks; electric eleva-tor; cost \$50,000; architect not selected; will open bids in about 30 days. M. L. Bunn may be addressed.

Md., Baltimore.-Northern Central Railway, G. Latrobe, general agent, Union Station, Baltimore, will erect office building at Mt. Vernon Yards, Woodberry; one story; 17x74 feet; frame and corrugated iron; M. C. Davis, 15 E. Fayette St., Baltimore, is estimating.

Md., Denton.-Farmers & Merchants' Telephone Co. will erect office building; two sto-ries; 44x100 feet; concrete block construction. Miss., Jackson.—First National Bank will rect bank building; cost about \$25,000; con-truction begun.

N. C., Conover.-Citizens' Bank of Conov will open bids October 1 to erect bank building; two stories; ordinary construction.

Okla., Creta.—Creta Development Co., J. C. Drew, president, is interested in erection of bank building in connection with development of townsite. (See "Land Develop ments.")

s. C., Columbia.—Union National Bank, Joseph Norwood, president, is having plans prepared by W. A. Edwards, Columbia, for bank and office building; 10 stories; 28x103 feet, with "L" in rear; elevator, with the proof shafts; steam heat; hot and cold water; vault system; cost \$100,000.

Tex., Houston.—J. J. Sweeney and H. Mas-terson are reported to erect office building at Fannin and Congress Sts.

Enterprises.")

Ky., Louisville.—J. D. Tobbe will erect apartment-house; two stories; brick; cost \$10,000.

\$2300. Va., Portsmouth.—First National Bank of Mo., Kansas City.—John Ravens will erect Portsmouth rejected all bids for improve-

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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ments to building at 305-308 High St. and is having plans revised by B. F. Mitchell, No folk. (Recently noted.)

Va., Portsmouth. — Portsmouth Busine Men's Association contemplates erection store and office building.

#### CHURCHES

Ala., Cordova.-J. M. Miller and P. M. Ala, Cornwittee, will receive bids to erect proposed Long Memorial Church; brick con-struction; plans and specifications at Miller Drug Store, Cordova, (Previously noted.)

Ala., Prattville.-Trustees of Methodist Episcopal Church will, it is reported, erect edifice to replace present structure

Ky., Bowling Green. - Christ Episcopal Church is having plans prepared by George H. Gray, Louisville, Ky., for construction; cost about \$25,000 for edifice; stone

La., New Orleans. — First Presbyterian Church will erect edifice; one story; con-crete block; cost \$11,800.

Mo., Columbus, - Methodist church will erect edifice; construction be The Pastor, Methodist Church.

Miss., Gulfport.—Building Committee of First Baptist Church, W. A. Hughston, chairman, will receive bids until October 23 to erect brick church; certified check for \$500, payable to Mr. Hughston; plans and specifications at office of Keenan & Welss, architects, Hibernia Bank Bidg., New Orleans, La.

Mo., Joplin. — Royal Heights Congrega-tional Church, Rev. H. W. Lambert of Chi-cago, III., pastor, will erect edifice.

Mo., New London.—Christian Church will rect edifice; cost \$12,000. Address The Pastor, Christian Church.

N. C., Raleigh,—Christian church, Rev. L. F. Johnson, pastor, will erect editice; brick; stone trimmings; seating capacity 550; cost \$16,000

N. C., Raleigh.-Christian church will erect collice; brick; stone trimmings; auditorium to seat 559; 19 Sunday-school rooms and Sun-day-school auditorium; cost \$16,000. Address The Pastor, Christian Church.

Okla., Creta.—Creta Development Co., J. C. Drew, president, is interested in erection of two churches. (See "Land Develop-

Tulsa. — East Tulsa Methodist Rev. J. C. Magee, pastor, plans to Church, erect edifice: brick construction.

S. C., St. Matthews.-St. Paul's Methodist Church is interested in erection of proposed st \$20,000. Address The Pastor, St Paul's Methodist Church

Tenn., Memphis.-Alfred D. Mason, Tennessee Trust Bldg., Memphis, may be addressed relative to addition to Second Presbyterian Church. (Recently noted.)

Tex., Lockhart.-Church of Christ plans to

Tex., Pharr.-Methodist congregation plans for proposed \$5000 edifice. Address The Pastor, Methodist Church.

Tex., Sherman.-First Baptist Church will erect edifice; cost \$50,000. tor, First Baptist Church. Address The Pas-

a., Portsmouth. — South St. Barch will creek Sunday-school to

bout \$6000. Va., Richmond.—Zio on Baptist Church (colored) will erect edifice to replace burned structure. Address The Pastor, Zion Bap-tist Church.

W. Va., Wheeling.-St. Matthew's Episo pal Church awarded contract to Bushoi Lehman, Elm Grove, W. Va., to erect chi at Echo Point; brick and stucco plaster.

#### CITY AND COUNTY

Ala., Marion—Jail.—Franklin County Com-issioners will erect jail to cost about \$9900; Dr. W. H. Oates, State prison inspector, ry, Ala.

D. C., Washington-Stable,-District Co. D. C., Washington—Stable.—District Com-missioners are having plans prepared by Snowden Ashford, Municipal Architect, Washington, for stable for street-cleaning department: 158x130 feet, with interior court 126x51 feet; fireproof construction; electric freight elevator, capacity 6000

Fig., St. Petersburg.—City rejected all bids to erect jail; plans call for structure 100x30 feet; two stories; brick; concrete floors; first floor cellroom; second story for offices for chief of police, Mayor, etc. (Recently

Md., Baltimore-Stables and Gatel Architectural Commission approved plans for ables of Street Cleaning Department on Greenmount Ave., near North Ave., and on Ridgely St.; cost \$20,000 each; also for gate-house at Ashburton reservoir to cost \$5000. (Previously noted.)

Md., Baltimore — Library.—City awarded contract to Walter E. Burnham, Law Bldg., Baltimore, to crect Enoch Pratt Branch Li-brary on 5th St., near Park Heights Ave.; one story and basement; ordinary brick costruction; 64x40 feet; cost about \$20,00 plans by J. Appleton Wilson and Wilson Smith, Law Bldg., Baltimore. (Recently noted.)

N. C., Canton-Home.-W. H. Henderson, chairman Board of County Con wil expend \$9000 to \$10,000 to erect home for will expend \$5000 to \$10,000 to erect nome for aged and infirm; 140x36 feet; brick; steam or hot-water heat; gasoline lighting; com-mon lift elevator; plans by A. L. Melton, Asheville, N. C.; recently noted to receive September (See "Machinery Wanted "

Okla., Clinton-City Hall.-City voted \$25, 000 bond issue for city hall. Address The Mayor. (Recently mentioned.)

Okla., Muskogee-Library.-Muskogee oka, Muskogee Labrary.—Muskogee Labrary Board, Carroll S. Bucher, president, Equity Bidg., rescinded action to receive propositions for drawings for proposed public library until November 1 (as recently noted); will submit new propositions asking bids for plans; probably limit same to a number of architects; if this is not success number of architects, it this is so, ful, will probably employ architect outright; to contain directors' assembly, juvenile, reading, reference, work and stack rooms: m separate building if p ot to exceed \$55,000

Okla., Oklahoma City-Fire Station,-City has plans for fire station No. 7 at (Hill; cost \$8000. Address The Mayor.

Tex., Dallas—City Hall.—City purchased site 100x200 feet at cost of \$250,000 and will erect city hall building; plans will not be made for 20 or 60 days; contract will not be let until bond election, probably to be ordered in April; W. M. Holland, Mayor. (Rec

Tex., Orange-Fire Department,-City will rote October 2 on \$5000 fire-department 1 ssue. Address The Mayor.

Tex., Van Horn—Jail.—Culberson county oted \$75,000 hond issue to erect courthouse nd jail. Address County Commissioners. (Previously noted.)

#### COURTHOUSES

Mo., Benton Mo., Benton.—Scott County Commission Ill receive bids until 1 P. M. October 18 fireproof courthouse building: plans and specifications at office of James Me Pheeters, County Clerk, and . H. Hol schild, architect, 312 Navarre Bldg.,

Mo., Paris.—Monroe county vote bond issue to erect courthouse. County Commissioners.

Okla., Perry.—Noble county will vote Sep-tember 26 on \$75,000 bond issue to erect courthouse. Address County Commissioners. (Previously noted.)

Tex., El Paso.—El Paso count, will vote November 7 on \$40,000 bond issue to improve ourthouse. Address County Commis

Tex., Van Horn.-Culberson county voted \$75,000 bond Issue to erect courbo mil. Addre County Commissioners. (Pre

#### DWELLINGS

Ala., Birmingham.-L. H. Mackey will erect esidence; one story; frame; cost \$4000.

Ark., Little Rock.—C. A. Reynolds will

residence: two stories: frame: cost

Ark. Little Rock .-- E. D. Bracy, 608 Main will erect six dwellings; 8 rooms; two es and basement; hot-air furnaces; cost each; plans (recently noted) prepared \$3000 each; plans (recently noted) pr by R. P. Morrison of Little Rock. 'Machinery Wanted.")

Ala., Mobile.-A. S. Towle will erect residence : two stories : cost \$3000.

Ark., Prescott.—M. W. Greeson is having blans prepared by Theo. M. Sanders, Little Rock, Ark., for additions and alterations to : cost \$4000.

Ark., Lonoke.-W. A. Barr will expend \$3500 to erect dwelling; 32x45 feet; ordinary construction; gas lighting; plans by Frank W. Gibb & Company, Little Rock, Ark. (Recently noted.)

D. C., Washington.—Louis C. Witkowski, 201-202 Maryland Bldg., will erect residence at Glen Echo

D. C., Washington.-G. W. Barkman, 300 Massachusetts Ave. N. W., has plans by A. H. Beers, 1342 New York Ave. N. W., Wash St. Paul St., Baltimore, for residence and

ington, for eight dwellings at 227-41 9th St. N. E.; two stories; brick; cost \$30,000

D. C., Washington.—Dr. Thomas A. Clayor, 1315 New Hampshire Ave. N. W., has lans by Clark Waggaman, 1120 Connecticut ve. N. W., and T. J. D. Fuller, 806 17th it. N. W., both of Washington, for residence at 1826 R St. N. W.: three storle : brick and stone: cost \$15,000. (Lately noted.)

D. C., Washington.-Clark Waggaman, 1124 Connecticutt Ave. N. W., will erect dwelling at 1824 R St. N. W.; three stories; brick and stone; cost \$15,000; plans by owner. (Reand stone; cos cently noted.)

Washington.-L. E. Breuninger, 1756 Park Rd., will expend \$6750 each to erect 10 dwellings; 20x60 feet; brick; hot-water heat; gas and electric lighting; construction by owner. (Recently noted.)

Fia., Anna Maria. - Lambert Jordan of Bradentown, Fia., will erect three cottages; concrete construction.

Fla., Jacksonville,-W. H. Thomps et two dwellings; two stories; frame

Fla., Jacksonville.—William E. Kay will erect six dwellings; two stories; frame.

Ga., Atlanta.-Mrs. M. H. Magill will erect wo dwellings; cost \$8000.

Ga., Athens.-W. T. Bryan's residence cently noted) will be 60x80 feet; two stories and basement; brick; steam heat; cost \$15,-000 to \$18,000; plans by F. J. Orr, Athens. (See "Machinery Wanted.")

Ga., Atlanta. — W. W. Whittington has plans by L. R. Wilburn, Peters Bldg., At-lanta, for dwelling; one story; frame; vapor heat; cost \$4660; day labor.

Ga., Atlanta.—Fulton County Home Builders will erect dwelling; eight rooms; two stories; frame; steam heat; cost \$5000; day Inhor.

will erect dwelling; one story; frame; day labor

Ga., Atlanta.-C. K. Ayer will erect story dwelling; frame; cost \$3650; day labor. Ga., Atlanta.-J. T. Daniel and J. H. Whitter, 748 Peachtree St., will creet two two-story dwellings; brick veneer; cost \$4000

Ga., Atlanta.-Mrs. Charles Withers 18 Boulevard Pl., will erect six-room d ing: one story; frame; cost \$3000;

Atlanta.-Fulton County Home Build-Cin ers will erect two dwellings; two stories; frame; cost \$5000 each; day labor.

Ga., Lawrenceville.—J. A. Perry will open ids October 1 to erect dwelling; one and one-half stories; frame; cost \$3500.

Ky., Louisville.—Pauline A. Brannon will creet frame dwelling; cost \$3300.

Ky., Louisville.—Henry Everson will ex-pend \$4000 for improvements to brick dwell-ing at 728 W. Market St.; plans by Joseph & Joseph, Louisville,

La., New Orleans.-G. Hausemann plates erection of residence to cost \$7500. (Recently noted.)

Md., Baltimore.-Abell Building Co., Abell Ave, and 31st St., will erect block of dwell Abell Ave.; 15x54 feet; electric ot-water heat; pressed-brick fronts

Md., Baltimore,—F. W. Hoffrogge of Fidel-ty Trust Co., Charles & Lexington Sts., is aving plans prepared for dwelling at Ten Hills.

Md., Baltimore. - Provident Realty Co poration, Garrison and Picdmont Aves., will erect cottage on Elsinore Ave., near Bate-Ave.: two and a half stories: orna-Ave., two and a han stores; orna-li frame; overhanging the roof; con-foundation; porches on three sides; ½ feet; electric lights; steam heat; \$4500; plans by Henry J. Tinley, 314 nental fran cost \$4500; plans by Her N. Charles St., Baltimore.

-Mont Alto Groves C rison Ave., Baltimore, for cottage on Allendale Rd, near Duvall Ave.; two and a half stories; frame; 30x36 feet; cost about \$5000.

Md., Baltimore.—Fred H. Foote, 3 W. Cam-den St., will erect residence on Homeland Ave. near Park Heights Ave.; two and a half stories; ornamental frame; overhang-ing slate roof; concrete foundation; porches on three sides; cost \$4500.

Md., Baltimore.—Frank Novak, 2808 Jeffer-on St., has plans by Joseph F. Hirt, 2808 Jefferson St. Baltimore, for 22 dwellings in 2600 block Madison St.; two stories; 13x42 feet; red pressed brick; marble trimmings; cement yards, cellars and pavements; cost

garage at Ten Hills; frame and stucco con-struction; two and a half stories.

Miss., Jackson.-B. P. Cantrell will creet esidence; brick veneer; cost \$3000

Mo., Kansas City.—A. H. Buckley will rect residence at Mission Drive and State

Mo., Kansas City.—J. A. Roberts, president of City Wholesale Grocery Co., will erect

Miss., Meridian.—Dave Smith will erect boarding-house at 10th St. and Twenty-third Ave.; four stories; brick; 40 rooms.

, Kansas City.-G. A. Wagner will erect dwelling; stone veneer; cost \$3000

Mo., Kansas City.—D. Gardner will erect residence; cost \$10,000.

Mo., Kansas City.-Clifford C. Jones of R. B. Jones & Sons will erect residence; 42x2 feet; stucco; heating not decided; cost \$10. 000 : plans by Shepherd & Farrar, Long R ldg., s City; will let contract in 10 days. Mo., Kansas City.-Bert Inman will erect

dwelling: frame: cost \$4500. Mo., Kansas City.-Charles II. Luce will

rect two dwellings: frame: cost \$5000

Mo., Kansas City.-J. H. Aiken will erect tone-veneered dwelling; cost \$5000. Io., St. Louis.—Dr. J. J. Link has plans William II. Gruen, St. Louis, for resi-

dence: Carthage Himestone; slate roof; gaage in basement: cost about \$300 Mo., St. Louis,-Hillside Real Estate & In

estment Co, will erect brick bungalow partments. (See "Apartment-Houses, Mo., St. Louis.-Henry Spongel will erect

of cottages to cost \$24,000 Mo., St. Louis,-Tyler Realty Co. will erect

five dwellings on De Tonty St. N. C., Flat Rock .- A. R. Lawton, Savannah. Ga. has plans by F. J. Orr. Athe Ga., for dwelling.

Okla., Oklahoma City.-Minta De Fordwill rect residence : frame : cost \$3500

Okla., Tulsa.-J. E. Rogers will erect residence: two stories: frame: 26x48 feet:

Tenn., Bristol.-Henry Ehert will erect

Tenn., Lookout Mountain.—N. Thayer Montague, Chattanooga, Tenn., will expend \$300 to erect 8-room bungalow; ordinary mill construction; architect not selected. (Recently noted at Chattanooga, Tenn.)

Tex., Aransas Pass.-W. E. Tedford will erect business building; brick.

Tex., Bryan.—J. A. Myers will receive bids until October 5 to erect two-story brick dwelling. (See "Miscellaneous Structures.")

El Paso.-Thomas R. Francis erect residence; one story; six rooms; brick and lumber: cost \$5000. Tex., El Paso.-T. R. Francis is repo

to erect two dwellings at Boulevard and Wil-

Tex., Lockhart .- Tom Connolly will erect residence: two stories: brick veneer

Tex., Lockhart.-J. Stanley Smith will erect

Tex., Lockhart .- J. Jared Lissper will erect

Tex., Lockhart.—John Storey of Lockhart National Bank will erect residence; two stories; brick vencer.

Va., Richmond.-Joseph Johnson will erect store and dwelling. (See "Stores.")

Va., Richmond. — Henry Bickerstaff will rect dwelling; two stories; brick; cost \$4000

#### GOVERNMENT AND STATE

Tex., Abilene-Hospital.-Epileptic Colony will open bids November 1 for repairing cot-tage previously reported damaged by storm; fireproof construction; brick; steam heat; electric lighting; cost \$15,000; plans by Wil-liam P. Preston, Abilene. (See "Machinery

Tex., Bryan—Postoffice.—J. A. Myers wil receive bids until October 5 to erect additional story to postoffice. (See "Miscelland addious Structures.")

Tex., San Antonio — Federal Building.— Treasury Department opened bids for im-provements to Federal building, including ew partitions and screens, additional boxes, loor in corridor, repainting inner walls, Grohn Decorating Co. of Joliet, Ill., is tile f

Va., Lexington — Postoffice.—Treasury Department, Office of Supervising Architect.
Washington, D. C. Proposals received in this office until 3 P. M. October 24, and then 16 opened, for const ad basement non-firep

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building, about 4200 square feet area (including plumbing, gaspiping, heating apparatus, electric conduits and wiring and lighting fixelectric conduits and wiring and ignating us-ington, Va., in accordance with drawings and specifications, copies of which may be obtained from custodian of site at Lexington, Va., or at this office, at discretion of Super-vising Architect James Knox Taylor.

#### HOTELS

Ala., Center .- D. R. Ward will erect hotel; ries : construction be

Ala., Center .- C. P. Ward will erect hotel replace Tennessee House.

Ala., Ragland.—Henry Lee will erect hotel at Church and Main Sts.; two stories and bissement; first floor for stores; upper floor to contain 39 rooms for hotel.

Fla., St. James City.—George Lawrence of Jacksonville, Fla., is interested in erection of hotel to be known as San Carlos.

Ga., Atlanta.—Carl Witt, 3 Orange St., will open bids in December to erect hotel; six stories; 100x100 feet; brick; cost \$75,000 to

Ky., Fancy Farm.-Dr. B. R. Merritt will rect hotel; two stories; concrete.

Mo., Kansas City.—J. H. White is having plans prepared by Jackson & McIlvaine, pwight Bidg., Kansas City; will remodel building as hotel. (Recently noted.)

Okla. Creta.—Creta Development Co. is interested in erection of hotel. (See "Land Developments.")

8. C., Greenville.-James H. McPherson 8. C., Greenville.—James H. McPherson and John A. McPherson contemplate crection of hotel or apartment building at Washington and Academy Sts.; five or six stories.

8. C., Rock Hill.—William A. Edwards, 632 Candler Bidg., Atlanta, Ga., is preparing plans for hotel; three stories and basement;

plants feet; brick; terra-cotta trimmings; steam heat; gas and electric lighting; gravel roof; cost \$60,000.

Tex., Austin.—Nalle estate, E. 6th St., will probably have plans prepared by S. N. Mapes, Austin. for hotel; eight stories; 138x160 feet; Austin. for note; eight stories; 138x160 feet; reinforced concrete; cost \$420,000; direct steam heat; cost of lighting, \$20,000; cement sidewalks; three electric elevators; date of opening bids not determined; actual work will not be started until spring of 1912.

(8. N. Mapes recently noted interested in erection of hotel.)

Tex., Corpus Christi.-M. Little, Lampasas, rex., will erect hotel (recently reported) on edge of bay; two stories; 50x150 feet; brick; steel partitions; lavatories; hot and cold water and steam heat in all rooms; also erect frame annex, to contain about 40 rooms, on pier 300 or 400 feet long; will begin construction about December 1. (See "Machinery Wanted.")

Tex., Port Lavaca.-J. J. Randle will erect hotel to contain 42 rooms; frame; heating not determined; electric lighting; cement sidewalks; cost \$10,000.

#### MISCELLANEOUS

Ark., Fort Smith-Infirmary.-Trustees of St. Edward's Infirmary contemplate enlarg ing institution.

Ark., Heber Springs-Sanatorium.-Heber Springs Sanatorium Co. incorporated with \$0,000 capital stock by C. F. Crosby, George Bennett and H. F. Fix; will establish sana-

Ark. Little Rock—Clubroom, etc.—Little Rock Railway & Electric Co. plans to erect clubroom and library for employes; cost about \$60,000.

D. C., Washington - Car Barn. D. C., Washington—Car Barn.—Capital Traction Co., Union Passenger Station, 36th and M Sts. N. W., will rebuild car barn at P and Water Sts. S. W.; will install concrete roof and floors to replace present wooden ones; retain present walls; cost about \$100,000.

about \$100,000.

Ga., Athens—Clubhouse.—Clovermont Country Club will expend \$4500 to erect clubhouse; two stories; 60x70 feet; ordinary construction; hot-air heat; plans by F. J. Orr, Athens. (Recently noted.)

La. New Orleans—Trainshed.—Louisville & Nashville Railroad, W. H. Courtenay, chief engineer, Louisville, Ky., will extend trainshed at passenger station 120 feet.

Md., Baltimore — Hospital. — Maryland Homeopathic Hospital will make improvements to building for cancer department; cost about \$20,000; contractors estimating are M. C. Davis, 15 E. Fayette St.; R. B. Mason, 210 E. Lexington St.; Edward Brady & Sons, 1109 Cathedral St.; P. J. Cushen, 212 Courtland St.; Morrow Bros., 213 E. Saratoga St., all of Baltimore. (Recently noted.)

N. C., Flat Rock—Stables.—George J. Baldwin, Sayannab, Ga., has plans by F. J. Orr, Athens, Ga., for stables and garage. (See "Miscellaneous Enterprises.")

Tenn., Nashville-Orphanage.-Baptist Orphanage, Rev. J. W. Stewart, superintendent, plans to erect children's home with industrial department and hospital in connec

Tex., Bryan-Postoffice and House.-J. A. Iyers will receive bids until October 5 to Myers will receive bids until October 5 to erect additional story to postoffice building on Anderson St.; brick construction; also receive bids at same time to erect two-story brick house on Main St.; certified check with former bid for \$250 and with latter for \$500.

Va., Suffolk—Hospital.—Dr. E. R. Hart and Dr. F. J. Morrison will erect hospital on Clay St.; brick; four storles; colonial style; massive columns extending to third story; heating, lighting, ventilating and bell sys-

W. Va., Keyser - Livery, etc. - Potomac Milling & Ice Co. will rebuild livery and storage building recently reported burned; 100x90 feet; steel and brick; cost \$15,000; in-stall elevator 23 feet long, capacity three ons; construction by owners.

#### RAILWAY STATIONS

Okla., Holdenville.—St. Louis & San Francisco Rallway Co., M. C. Byers, chief engineer of operations, Springfield, Mo., and Chicago, Rock Island & Pacific Railroad, J. B. Berry, chief engineer, Chicago, Ill., will erect union depot to cost \$15,000. (Recently reverted) ported.)

Tenn., Trenton.—Mobile & Ohio Railroad, B. A. Wood, chief engineer, Mobile, Ala., will erect passenger station.

Tex., Beaumont.—St. Louis & San Fran-

cisco Railway, F. G. Jonah, chief engin-er, St. Louis, Mo., will, it is reported, expend \$190,000 to erect and equip station and \$290,000 for freight depot and terminal facilities. (Previously noted.)

Tex., Seymour.—Wichita Valley Railroad, R. C. Gowdy, chief engineer, Wichita Falls, Tex., and Gulf, Texas & Western Railway, B. B. Cain, general manager, Dallas, Tex., will erect union passenger station; brick; east \$20,000

Tex., Smithville.-Missouri, Kansas & Texas Tex., Smithville.—Missouri, Kansas & Texas Railway, A. M. Acheson, chief engineer, Dalas, Tex., will erect annex to passenger depot; concrete; mission style; tile roof; will contain storage-room with capacity for two cars of ice, room for train boxes, battery-room, etc.; 28x46 feet; fireproof.

#### SCHOOLS

Ark., Fayetteville.-University of Arkansas, John Tillman, president, plans to erect building to be known as Peabody Hall and cost about \$40,000.

Ost about \$40,000.

D. C., Washington.—District Commissioners are having plans prepared by Snowden Ashford, municipal architect, District Bidg., Washington, for two four-room school buildings; 32x96 feet; two stories and basement each; ordinary construction; indirect gravity steam heat and ventilating apparatus. (Recently noted to receive bids until September 28.)

Ga., Cochran.—City will vote October 23 on \$20,000 bond issue for school improvements. Address The Mayor.

Ky., Pineville.—F. A. Heath, City Clerk, may be addressed relative to issuance of \$30,000 of bonds to erect school. (Recently noted.)

La., New Orleans.—City is having plans prepared by E. A. Christy, New Orleans, for domestic-science department to Upper Girls' High School; will contain kitchen, cold storage, sewing and fitting rooms, etc.; cost about \$4000.

La., New Orleans.—Tulane University, Dr. E. B. Craighead, president, will erect pro-posed gymnasium to cost \$25,990; will later equip with natatorium at additional expenditure of \$10,000.

Md., Baltimore.—City is having plans pre-pared by F. E. & H. R. Davis, 220 St. Paul St., Baltimore, for school on Ann St. and Canton Ave.; 16 rooms. (Recently noted.)

Md., Frederick.—Woman's College, Joseph H. Apples, president, contemplates, it is reported, erection of college buildings.

Mo., Kansas City.-Board of Education will expend \$60,000 to erect school Waldron Sts.; brick construction, ool at 37th and

Mo., St. Louis.—Rev. J. J. Glennon will erect dormitory building at 3002 Washington St.; two stories; cost \$30,000.

N. C., Charlotte, — School Commissioners purchased site for negro school in Ward 3; eight rooms; cost \$10,000. (Recently noted.)

Okla., Bartlesvile. — Washington County Commissioners, A. C. Ward, chairman, will receive bids at office of J. C. Mitchell, County Clerk, until October 16 to erect school building; certified check for 10 per cent. amount of bid; bidders to state time of completion; plans and specifications at office of County Clerk as above.

Okla., Oklahoma City. — State Medical School, Dr. R. F. Williams, dean, leased Rolater Hospital and will enlarge and in-stall additional equipment; will erect two-wings and increase capacity from 22 to 60 bods

Okla., Oklahoma City.-Oklaho College is having plans prepared by Balley & Balley, Colcord Bldg., Oklahoma City, for central building; 169x76 feet; two stories and basement; reinforced concrete; auditorium to seat 800; cost \$100,000.

S. C., Eau Claire, P. O. Columbia.—School District No. 3 will erect school building; brick; probably steam heat; electric lighting; cost \$20,000; architect not selected; James B. Duke, member Board of Trustees. (Bond issue of \$20,000 recently noted voted.)

S. C., Rock Hill.-Winthrop College will have plans ready for estimates in about three weeks for training school; plans by William A. Edwards and Charles Franklin. associate architects, Atlanta, Ga. (Recently described.)

N. C., Vanceboro.—Craven County Farm Life School Trustees selected site for school. (Previously noted.)

S. C., Columbia.—Hyatt Park School Dis-trict Trustees will Issue \$20,000 worth of bonds to erect school. trict

Tenn., Rockwood.—City is having plans prepared by W. A. Geasland for school building; brick; hot-water heat; cost \$12,500. Address The Mayor. (Recently noted to vote on \$15,600 bond issue.)

Tex., Austin.—Blind Institute, E. E. Bram-lette, superintendent, will erect \$10,000 in-dustrial building; is having plans prepared by C. H. Page & Bro., Austin.

Tex., College Station.—Agricultural & Mechanical College, Walton Peteet, president of Board of Directors, Fort Worth, Tex., will erect electrical and mechanical engineering building and dormitory.

Tex., Cuero.—Cuero School District will vote October 9 on school tax. Address Dis-trict School Trustees.

Tex., DeSoto.-DeSoto School Precinct No. 39 contemplates election to vote on \$10,000 bond issue to erect school. Address District School Trustees.

Tex., Gatesville.—State Institute for Training Juveniles is having plans prepared by C. H. Page & Bro., Austin National Bank Bidg., Austin, Tex., for dormitory; has appropriation of \$30,000.

Tex., Houston.—William M. Rice Institute, Edgar Odell Lovett, president, 1110-1112 Scan-lan Bidg., will receive bids until noon Octohar fug., with receive has until noon decidence ball for men on Main St.; certified check for \$10,000, payable to William M. Rice In-stitute; plans and specifications from Cram, Goodhue & Ferguson, architects, Scanlan Bldg., Houston, on deposit of \$50; E. Raphael, secretary of institute.

Tex., Waco.—City will issue \$70,000 of bonds for school improvements. Address The Mayor. (Previously noted.)

W. Va., Charleston.—Board of Education, Independent District of Charleston, W. O. Saum, secretary, receives bids until September 30 to erect room addition to Lincoln school building on Roane St. side; proposals in detail as to excavation, foundation, brick work, wordwork, word site or as complete. work, woodwork, roof, etc., or as complete building, except plumbing and heating; in-formation as to plans, specifications, etc., on application to A. G. Higginbotham, chairan of building committee.

W. Va., Petersburg .-- City is having plans prepared by Holmboe & Lafferty, Clarksburg, W. Va., for school building; fireproof con-struction; cost \$500. (Bond Issue of \$7000 recently noted voted.)

#### STORES

Ala., Birmingham.—Tony Scotze will erect store building; two stories; brick; cost \$9500. Ala., Decatur.—Paul M. Terry will erect usiness building; brick construction.

Ala., Ragland.—Henry Lee will erect store and hotel building. (See "Hotels.") Ala., Tuscaloosa.—W. B. Oliver, C. B. Ver-ner, W. N. Maxwell and T. D. Maxwell will erect business building.

Ark., Little Rock.—Miller Grocery Co. will erect store building at Pulaski Heights Station; brick construction.

Ga., Atlanta.-M. L. Thrower will erect brick addition to business building; cost

Ky., Louisville.—Baptist World Publishing Co. is having plans prepared for store build-ing, etc. (See "Miscellaneous Enterprises.")

Ky., Louisville.—Baptist World Publishing Co. is having plans prepared by B. J. Hawes, Louisville, for store, printing plant and apartment building. (See "Miscellaneous Enterprises,")

New Orleans.-Equitable Real Estate Co. will erect business building; five stories; brick; cost \$29,490.

La., Shreveport.-Ernest Laenger will erect store building; one story; foundation to support two additional stories; 80x90 feet; cost \$5500; construction begun.

Md., Baltimore.—Little Joe Wiesenfeld Co., Baltimore and Howard Sts., is having plans prepared by Mottu & White, 322 N. Charles St., Baltimore, for improvements to store building. (See "Warehouses.")

Mo., Kansas City.—George Muchlebach will rect store building; brick; cost \$6000.

Mo., Kansas City.—John Ravens will erect tore and apartment building; brick; cost \$4000.

Mo., St. Louis .- Petty Tire & Rubber Co. will erect salesroom and warehouse.

'Warehouses.") N. C., Winston-Salem,-R. Davis will erect two store buildings; two stories; brick; cost \$6000; day labor.

Tenn., Chattanooga.—W. A. Terrell & Son, Hickory St. and Chamberlain Ave., will re-build store recently burned; loss about

Tenn., Memphis.—Mr. Bowers' Stores, Inc., incorporated with D. W. Fly of Fly & Hobson Company, president; will operate chain of grocery stores, taking over 35, and will erect 15 additional store buildings in suburbs.

Tex., Alice.—J. A. Richards and James Gib-on will erect business building to replace burned structure.

Tex., Aransas Pass.-II. Brooke will erect building; brick; 25x80 feet; con struction begun.

Tex., Gouldbusk .- Walker Mercantile Co.

will crect store building; construction begun.
Tex., Houston.—Levy Bros.' Dry Goods Co. will creet store building; three stories and basement; 20,000 square feet floor space; ele-vator; will also improve present structure, install three elevators, etc.

Va., Portsmouth. — Portsmouth Business Men's Association contemplates erection of store and office building.

Va., Richmond.—Joseph Johnson wild fore and dwelling; brick; cost \$3000,

Va., Richmond.—Elizabeth Augustine will creet store building; two stories; brick; cost \$4500.

#### THEATERS

Ga., Savannah.—Montgomery Amusement Co. will expend \$7000 to remodel moving-picture parlor; 60x30 feet; ordinary construc-tion; heating not decided. (Recently noted.)

Okla., Oklahoma City.—A. H. Simmons, Houston, Tex., will, it is reported, erect tleater; cost \$60,000.

#### WAREHOUSES

Ala., Florence.-M. M. Striplin will erect ofton warehouse at Pine and Tennessee its.; 55x100 feet; corrugated iron; brick Sts. : effect in front.

Ala., Prattville.—Continental Gin Co., general offices, Birmingham, Ala., will, it is reported, creet warehouse; three stories.

D. C., Washington.—Charles E. Myers, 1429 L. St. N. W., purchased Ward Bldg, at 923-31 D St. N. W. and will remodel for warehouse.

Ga., Macon .- McCaw Manufacturing Co., owned by Proctor & Gamble Manufacturing Co. of Cincinnati, O., will rebuild seed ware-house reported burned; loss about \$25,000.

Md., Baltimore.—Little Joe Wiesenfeld Co., Baltimore and Howard Sta., is having plans prepared by Mottu & White, 322 N. Charles St., Baltimore, to remodel store and ware-house, including installation of elevator, etc.

Mo., St. Louis.—Petty Tire & Rubber Co. will erect salesroom and warehouse; two stories; cost \$15,000.

N. C., Durham .- W. T. Pollard and J. W. Sts.; about 150x150 feet.

N. C., Morganton.—Alpine Cotton Mills will erect warehouse; brick; work by com-pany's force; construction begun.

will erect store building at Pulaski Heights
Station; brick construction.

Ga., Atlanta.—J. P. Sturgeon will erect
business building; brick; cost \$4000.

S. C., Columbia.—Farmers' Bonded Warehouse Co. incorporated with \$10,000 capital stock; will erect warehouse; capacity for business building; brick; cost \$4000.

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S. C., Enfield.—Enfield Farmers' Union Warehouse Co. incorporated with \$25,000 cap-ital stock by J. H. Sherrod, J. W. Hardee and others.

Tenn., Lenoir City. -Hardware Co. is proceeding with erection of ordinary nstruction 60x120 feet; cost \$5000; G. M. Dial superin

Tex., Orange.—Texas Company, Houston, ex., will, it is reported, make improve-tents to warehouse under supervision of B. Thetford, company's special representative.

Worth, to erect warehouse; 100x100 feet; four stories; mill construction; cost \$40,000. (Recently noted.)

- American Expr Wells, Fargo & Co. and United States Express Co., 2 Rector St., all of New York, reported to erect joint express depot; f proof; 75x15 feet; cost \$20,000.

W. Va., Keyser.—Thompson Furniture Co., I. S. Thompson, manager, will erect ware-ouse; 50x129 feet; two scories; metal H. S. Th

W. Va., Keyser.—Potomac Milling & Ice Co. will rebuild storage building, etc., re-cently reported burned. (See "Miscella-neous.")

cently noted as having contract and Seaton & Seaton as architects )

Fla., Key West.-Newton Curry awarded ontract to James & Joseph Hannible, Key West, to erect dwelling; 55x61 feet; two stories; artificial stone; stormproof and semi-fireproof construction; electric wring; cost \$6694; plans by T. M. Bryan, 719 Caro-line St., Key West. (Recently noted.)

Ga., Atlanta.—H. Walker has plans by t. Wilburn, Peters Bldg., Atlanta, dwelling; 9 rooms; frame; steam heat; cost \$4500; construction by owner.

Ga., Atlanta.-Coles Investment Co. awarded contract to J. Walker, Atlanta, to erect dwelling; two stories; 8 rooms; plaster; furnace; cost \$5000.

Ga., Atlanta,-Mutual Loan & Banking Co. awarded contract to S. W. Sullivan, Atlanta, to erect three one-story dwellings; frame; aggregate cost, \$5400.

Ga., Atlanta.—William Hartsock Company has plans by and awarded contract to C. E. Miller, 402 Empire Bidg., Atlanta, to erect two one-story and one two-story dwellings; two frame and one brick veneer; cost \$3500, \$4000 and \$8000, respectively.

Ga., Lagrange.—J. L. Bradfield awarded contract to Pike Bros., Lagrange, to erect dwelling; 37½x57½ feet; ordinary construc-tion; grates, electric lighting; cost 3390; plans by Arthur W. Smith, Candler Bldg., Atlanta, Ga. (Recently noted.)

Md., Baltimore.-James A. Bealmear, Fidelity Bldg., awarded contract to Charles H. Gerwig, 2238 W. North Ave., Baltimore, to erect eight dwellings on Remington Ave.; two stories; brick; 13 feet 9 inches by 42 feet; cost \$16,000; plans by Jacob F. Gerwig, 210 E. Lexington St., Baltimore.

Md., Baltimore -George T. Horn of Horn & Horn, 304 E. Baltimore St., awarded con a rioth, 304 E. Baltimore St., awarded contract to Henry S. Rippel, 1-7 Clay St., Baltimore, to erect residence on Carlisle Ave.; frame; cost \$3500; plans by Otto G. Simonson, American Bidg., Baltimore. (Recently

.-William F. Bins nestead St., awarded contract for erec tion of nine dwellings at Gorsuch Ave, and Polk St.; two stories; brick; porch fronts.

Md., Baltimore.-Mrs. E. Eisenberg Liberlei awarded contract to John P. Brandau. 700 E. North Ave., Baltimore, to erect cottage at West Arlington; two and a half stories; slate roof; electric lights; steam heat; cost \$6000; plans by H. C. Aiken, 223 St. Faul St., Baltin

Mo., Kansas City.-F. C. Pickett, 2411 E. 13th St., awarded contract to James B. Lusk, Kansas City, to erect dwelling; 26x38½ feet; ordinary and mill construction; furnace; gas and electric lighting; cost \$3500; plans by owner. (Recently noted.)

Mo., St. Louis.-John A. Leschen aw contract to Remmers Construction Co. to erect dwelling; 64x52 feet; hot-water heat; plans by Hellmuth & Hellmuth, St. Louis. (Recently noted.)

Tex., Bryan. - Ed S. Sims, manager of ryan Telephone Co., awarded contract to H. Gammon, Jr., to erect five-room cottage.

Tex., Dallas.—J. D. Aldredge of Aldredge Knight awarded contract to H. P. Sel Dallas, to crect 10 two-story frame res & Knight : Dallas, to dences in East Dallas, and after their com pletion to erect five additional ones

Tex., Dallas.-A. J. Knight, 4312 Live Oak St., awarded contract to C. M. McNatt, Dallas, to erect dwelling; eight rooms; 36x feet; ordinary construction; gas heat; ele tric lighting; cost \$3500. (Recently noted.)

Tex., Smithville.-V. S. Robb awarded co to M. M. Turney, Smithville, to erect residence; cost \$5000.

Tex., Smithville.—V. S. Rabb, Jr., awarded contract to M. M. Turney, Smithville, to erect dwelling; 38x40 feet; electric lighting; cost \$4560; plans by R. L. Pierce, San Antonio, Tex. (Recently noted.)

Va., Lynchburg. — Rivermont Realty Co. awarded contract to W. K. Barger, Lynch-burg, to erect residence on Randolph-Macon Heights.

Va., Richmond.—E. Enders awarded contract to R. A. Suewers, Richmond, to erect dwelling; two stories; 27x48 feet; Broomell system of heating; cost \$4500; plans by C. Ruehrmund, 14 W. 8th St., Richmond. (Recently noted.)

Va., Roanoke.—C. E. Mayhew, 715 Dale Ave., awarded contract to J. R. Carter, Patterson Ave., Roanoke, to erect dwelling; two stories; 34x35 feet; frame; slate roof; hot-water or vapor heat; electric lighting; cost \$3000, (Recently noted.)

frame and brick veneer; hot-water heat; gas and electric lighting; plans by J. T. Collins & Sons, Staunton, Va.; contracts recently noted awarded to W. T. Marr and George R. Evans for wood and brick work. respectively.

#### GOVERNMENT AND STATE

Ala., Eufaula—Postoffice.—Treasury Department, James Knox Taylor, supervising architect, Washington, D. C., awarded contract to erect postoffice building.

Ala., Gadsden — Postoffice. — Treasury De-partment awarded contract at \$83,362 to In-ter-State Construction Co., Saginaw, Mich., to erect postoffice building. (Lately noted.)

Ga., Waycross — Postoffice. — Treasury De-partment, James Knox Taylor, supervising architect, Washington, D. C., awarded contract to A. B. Stannard, 1133 Broadway, New York, to erect postoffice building; one three stories; granite and marble superstra ture with concrete floors; roof covered with red tile; inside measurements, 52x92½ feet; 35 feet high from basement to re heat. (Previously noted.)

Md., Crownsville (not a postoffice)—Hos-pital.—Managers of State Hospital for Col-ored Insane, Austin L. Crothers, chairman of board, awarded contract to John Waters, 23 E. Center St., Baltimore, Md., to erect hospital building; cost \$60,000; construction begun. (Previously noted.)

#### HOTELS

Ga., Carrollton.-Clifton Hotel Co., L. C. viandeville, proprietor, awarded contract to Winder Lumber Co., Winder, Ga., to erect totel; four stories and basement; 100x60 feet; brick and frame; steam heat; electric light-ing; cost \$25,000; plans by Morris & Morris. Atlanta. (Contract recently noted award to J. B. Williams of Winder, Ga.)

Tex., Rockport.—I. W. Gillett, Reeville, fex. (recently noted to have received con-ract to erect hotel), states that contract

#### MISCELLANEOUS

Ark., Fort Smith-Church House.-Schlen k Son, Fort Smith, has contract to erect ch house; plans by A. C. Chisholm, 801 ison Ave., Fort Smith. irch ho

Mo., St. Louis.—Father Dunne's Newsboys' Home, Garrison and Washington Aves, awarded contract to Frein Masonry & Contracting Co., St. Louis, to erect wing to home cost about \$30,000. (See "Miscellaneous Enterprises."

N. C., Charlotte-Stable.-Joe Grier, W. C. McAuley and W. M. Bradford awarded con-tract to Goode Construction Co., Charlotte, to erect proposed stable.

Salem - Mansoleum - Mrs. Va. , Saled — Mausoleum. — Mrs. 1. In-er awarded contract to National Marble anite Co., Marietta, Ga., to erect mauso-in East Hill Cemetery; 15x11x14 fect; solid granite; six catacombs

#### RAILWAY STATIONS

Ky., Versailles.-Kentucky Traction & Terminal Co. awarded contract to Fred J Rump, Versailles, to erect substation, pas senger station and freight-room. (See "Elec tric Plants.")

N. C., Charlotte.-Piedmont Traction Co. to erect freight depot in Charlotte and com to erect freight depot a bination passenger and freight depots at Lowell and Mt. Holly, N. C.; former 240 feet long; two stories, including basement; white brick; tile roof; plans by Hook & Rogers, Charlotte; will erect passenger station in Charlotte later.

N. C., Lowell.-Piedmont Traction warded contract to J. A. Jones. Charlotte, N. C., to erect combination freight and pas-senger station. (See N. C., Charlotte.)

N. C., Mt. Holly.—Piedmont Traction Co. awarded contract to J. A. Jones, Charlotte, N. C., to erect combination freight and pas-senger station. (See N. C., Charlotte.)

#### SCHOOLS

Ark., Alma.-Alma School Board awarded ontract to erect school; cost \$20,000.

Ark., Alma.-Alma School District No. 31 awarded contract to G. F. Ford & Son to erect school building; 64x55 feet; ordinary construction; brick; cost \$8000. (Recently noted.)

Ark., Crawfordsville.—City awarded con-tract to Monk & Richie, Pine Bluff, Ark., to erect high-school building; cost \$21,000 plans by Clyde A. Ferrel, 314 National Bank Bldg., Little Rock. (Recently noted.)

Houston. -

Tex., Fort Worth.—Hunt-Hawes Grocery Co. has plans by Sanguinett & Staats, Fort

APARTMENT-HOUSES

Ga., Brunswick.—Mrs. L. L. Lloyd awarded contract to W. C. Anderson to erect apart-

tract to W. O. Hawley, Savannah, to erect store and apartment building. (See "Stores.")

N. C., Winston-Salem.-J. L. Casper award-d contract to Charles Lorman to erect

Tex., Dallas.—J. Dawson Matthews awarded contract to B. H. Clardy, Dallas, to erect apartment-house; 59x70 feet; two stories;

bot-water heat; cost \$8500; plans by owner

ASSOCIATION AND FRATERNAL

Ala., Fairhope.—Ancient Free and Accepted Masons awarded contract to Johnson & Dy-son, Fairhope, to crect Masonic Temple; 30x66 fee; cement block; stoves; accetylene-gas lighting; cost \$3260. (Recently noted.)

BANK AND OFFICE Ala., Birmingham.—American Trust and Savings Bank awarded contract to Fred A

Jones Building Co., Dallas, Tex., to erect bank and office building; 20 stories; fire-proof; 50x125 feet; marble and glazed terra-cotta facings; five elevators; vacuum clean-

ing plant; mail chute; cost about \$500,000; plans by Leslie Welton, Birmingham; Mo-

bray & Uflinger, supervising architects, 56 Liberty St., New York. (Recently noted to have awarded contract for foundation to Réalty Construction Co., Birmingham.)

tract to Hammett Fireproofing Co., Colorado Bidg., Washington, to repair office building at 15th and H Sts. N. W.; cost \$3600; plans

Stanley Simmons, 1301 G St. N

N. C., Wilmington.-Atlantic Trust & Bank

Market Sis., general contract for which was recently noted awarded to Joseph Schad, Wilmington; eight stories and basement; 3(x51 feet; steel frame, reinforced and fire-

proof; cost \$70,000; plans by J. F. Leitner, Wilmington. (Recently noted.)

Ga., Blakely.-Farmers' State Bank will

spend \$10,000 to erect bank building; 28x58 feet; brick partitions; metal ceilings; plans by M. J. Reidy, Albany, Ga.; contract re-cently noted awarded to John Ittner of Itt-

Ga., Savannah.—M. Wilensky awarded con-tract to W. O. Hawley, Savannah, to erect store and apartment building; two stories; white brick front; cost \$15,000; lower floor

stores; upper floor for apartments.

Eutaw St. near Fayette St., awarded of tract to Wm. Ferguson & Bro., 214 Clay Baltimore, to improve and enlarge be building, including new front, addition

Tex., Fort Worth.-Waples-Platter Gre

Md., Baltimore.-Western National Bank

rear, etc.; cost about \$120,000; plans by Has-kell & Barnes, 301 N. Charles St. (Recently

ner Bros., Albany, Ga.

noted.)

Co. awarded contract at about \$6000 to E. Longley, Wilmington, to install heat-system in bank building at Front and

Washington. — Southern Building ion, Colorado Bldg., awarded con-

eight-room tenement-houses; frame;

ment-house at Union and F Sts.

Ga., Savannah.-M. Wilensky award

BUILDING CONTRACTS AWARDED Ark., to erect edifice; cost \$8000; plans by on, Little Rock

oted.)

Ga., Sayannah. - St. Philip's A. M. E. Church awarded contract to R. E. Pharrow, 210½ Auburn Ave., Atlanta, Ga., to erect proposed edifice; 52x94 feet; ordinary construction; steam heat; electric lighting; cost \$35,600; plans by J. A. Lankford.

La., Castor.—Methodist Church awarded contract to James Cargill, Castor, to erect

S. C., Greer.-Methodist Episcopal Church awarded contract to O. C. Smith, Athens, Ga., to erect edifice; brick; cost \$15,000; plans by Sayre & Baldwin, Anderson, S. C.

Tex., Fort Worth.—East Side Christian Church, Rev. Dr. Clinton Lockhart, pastor, awarded contract to erect edifice; 30x68 feet; five rooms and baptistry.

W. Va., Williamstown.—Methodist church will expend \$17,000 to erect edifice; one story and loft; 70x85 feet; ordinary construction; furnace; gas and electric lighting; plans by W. J. Alexander, New Martinsville, W. Va.; contract recently noted awarded to S. II. Lowther, Parkersburg, W. Va.

#### CITY AND COUNTY

Athens - Jail. - Limestone County Commissioners awarded contract at \$11.58 to Pauly Jail Building Co., St. Louis, for improvements to jail; will convertwo-story structure. (Lately noted.)

Ala., Troy — Jail. — Pike County Commis-sioners awarded contract to Southern Struc-tural Steel Co., San Antonio, Tex., to erect jail. (Recently noted.)

Va., Norfolk—Fire Station.—City awarded contract to Gregory & Williamson of Nor-folk to erect fire station; 48 feet 6 inches by 93 feet; steam heat; electric lighting; cost \$18,000. (Gregory & Williamson recently 8,000. (Gregory & Woted as lowest bidders.)

Va., Norfolk—Fire Station.—City awarded contract at \$16,031.37 to Gregory & William-son, Norfolk, to erect Bute St. fire station; plans by Ferguson, Calrow & Taylor, Norfolk. (Recently noted as lowest bidders.)

#### **DWELLINGS**

Ala., Gadsden.-W. C. Bellinger will ex-end \$5000 to erect two dwellings recently oted; two stories; 25x74 feet; frame; gas and electric lighting; plans and construc-tion by G. D. Hamil, 806 Riley St., Gadsden. "Machinery Wanted.")

Ark., Little Rock. - Guy Carcn awarded contract to S. R. Byarley, Little Rock, to erect cottage; two stories; frame: cost \$3000 Ark., Little Rock.—E. D. Bracy awarded contract to W. L. Oglesby, Little Rock, to residence; two stories; frame; cost

contract to William Peterson to er-idence on Midland Hills; two stories hardwood floors; hot-water heat; cost \$5000.

cost \$12,000.

D. C., Washington.-W. F. Collins awarded contract to R. C. Hess, 115 Tennessee Ave.
N. E., Washington, to erect four dwellings at 1348-54 E. Capitol St.; two stories; brick; cost \$12,000; plans by F. B. Proctor, Wash-

Bradentown, Fla., to erect bungalow.

Fla., Jacksonville. — Springfield Presbyte-rian Church, Rev. I. Ross Lynn, pastor, awarded contract to Seaton & Seaton, Jacksonville, to erect parsonage; 30x00 feet; concrete to second floor; shingles above; fireplaces and gas heat; electric lighting; cost \$4000; plans by Claude Streeter, Baidwin Bidg., Jacksonville. (Mr. Streeter repend \$3500 to erect dwelling; 40x40 feet; \$10,125 to Blevins & Leigh, Van Buren, Ark.,

# Co. awarded contract to Buchanan & Gilder to erect office building; 45x85 feet; Kahn sys-tem; natural gas heat; electric lighting; cost \$5000; plans by F. C. Shaw. (Recently Va., Clarksville.-Union National Bank

w. va., Charastrict to Thompson & Starrett Company, 49 Wal St., New York, to erect bank and office building; 40x95 feet; fireproof on : cost \$200,000 : plans by Wyatt & Nolting, Keyser Bldg., Baltimore, Md. cently described.)

CHURCHES

Ark., Prescott.-Presbyterian Church award-d contract to William Bengel, Newport,

Ark., Little Rock.—Theo M. Sanders award-d contract to William Peterson to erect

Ark., Pine Bluff.—D. L. Bain awarded contract to R. J. McBride to erect residence;

Fla., Anna Maria.-F. D. Waite, Palmetto, la., awarded contract to F. F. Chapman,

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned

8, 1911.

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to erect school; six rooms and auditorium; stem heat; drainage system; plans by H. C. Schwebke, Fort Smith, Ark. (Recently

La., Coushatta.—Red River Parish School pirectors will expend \$21,250 to erect school building; 90x100 feet; two stories; ordinary construction; low-pressure steam heat; plans by E. F. Nield, Shreveport, La.; contract recally noted awarded to J. R. Randolph, Esston, La.

Baston, La.

Md., Belair.—Harford County School Commissioners awarded contract to D. J. Shanahas, Fallston, Md., to erect addition to high school, 50x70 feet, and to erect eight-room school at Slate Ridge; mill construction; steam heat; electric lighting; cost \$15,000; plans by Otto G. Simonson, American Bidg., extenses, Md. re. Md.

Baltimore, Md.

Mo., Kansas City.—Harden B. Leachman awarded contract to Jones-Weaver Construction Co., Kansas City, to erect building at 25% E. 12th St.; two stories; frontage 75 feet; cost \$16,000; lower floor for stores; upper floor for Leachman-Damron School of Advertising; plans by Owens & Payson, Kancelte. sas City.

as City.

8. C., Gaffney.—Limestone College trustees awarded contract to L. Baker, Gaffney, to erect annex building, recently noted, to contain dormitory, dining-room, etc.; 60x69 feet; four stories; fireproof construction; steam heat: electric lighting; hand elevators; cost \$20,000; plans by Wheeler & Stern, Charlotte, N. C. (See "Machinery Wanted.")

8. C., Honea Path.—Honea Path School Board awarded contract to Honea Path umber Co., Honea Path, to enlarge graded achool, including addition to auditorium and ur additional classrooms; cost \$7000; plans by Sayre & Baldwin, Anderson, S. C. (Recently noted.)

Tex., San Antonio.-City will erect school rex., Sall Antonio.—City will erect school building; 82x151 feet; fireproof construction; two stories and basement; cost \$54,724; plans by Seuttor & Shands, San Antonio; contract recently noted awarded to J. C. Dielmann,

recently noted awarded to J. C. Dielmann, 36 E. Commerce St., San Antonio. W. Va., Clay.—City awarded contract to J. II. Perrine to erect school; brick; stone (rimmings: 6ix1i0 feet; two stories; cost \$5,600; plans by H. Rus Warne, Charleston, W. Va.

#### STORES

Ark., Althelmer.—L. and M. L. Althelmer awarded contract to Graham & Boahs to erect business building; two stories; brick; 000.018 ts

D. C., Washington .- I. D. Blackstone will expend \$5000 to erect business building; \$230 feet; ordinary construction; plans by George P. Hales, Bond Bidg., Washington; contract recently noted awarded to Gormley-Peynton Company, Union Trust Bidg., Washington.

Fia., Jacksonville.—Max Isaac and Frank T. Nooney awarded contract to W. S. Kodz, Jacksonville, to erect building (six stores); brick; cost \$6000. Recently noted.)

Ga., Atlanta.-Florence Investment Co., 315 Pachtree St., has plans by and awarded contract to Padgett & Son, 1013 Candler Bilg., Atlanta, to erect store building; 50x50 feet; brick; tar and gravel roof; cost \$8000.

Mo., Kansas City. — Wheeler Bros. will erect store building; brick; 50x55 feet; brick and concrete; gas heat; gas and electric lighting; cost \$4000; plans by Clark Williams, 765 Bank of Commerce Bldg., Kansas City; contract awarded.

Mo., Kansas City.—Harden B. Leachman awarded contract to Jones-Weaver Construc-tion Co., Kansas City, to erect store and school building. (See "Schools.")

N.C., Rocky Mount.—George J. Hales awarded contract to J. H. Daughtridge & Sons, Bocky Mount, to erect business building; 48x110 feet; ordinary construction; cost 48000; plans by John C. Stout, Rocky Mount.

Okla., Oklahoma City.—S. E. Clarkson will expend \$50,000 to erect store building; 100x130 feet; mill construction; elevator to cost \$500; plans by W. A. Wells, Oklahoma City; contract recently noted awarded to Lisle-Dunning Construction Co., Oklahoma City; material purchased.

Tex., Bryan.—G. W. Smith estate will expend \$3750 to erect store building; 30x50 feet; ordinary construction; install elevator \$15 feet; contract recently noted awarded to C. E. Jenkins, Bryan.

Tex., Harlingen.—A. M. & H. J. Letzerich awarded contract to A. Goldammer, Harlingen, to erect proposed store building; two stories; 42x80 feet; pressed brick; cost \$6300.

Tex., Houston.—J. G. A. Frank awarded contract to D. S. Castle, Houston, to erect business building; three stories; brick; 21x95 feet; cost \$11,500 to \$12,000.

Tex., Orange.—C. W. Nemtis awarded contract to J. P. Hilliard of Mauriceville, Tex., to remodel and improve store building occupied by Crown Mercantile Co.; will install steel front with show windows, prism glass,

#### WAREHOUSES

Md., Baltimore.—John Hopkins Hospital Trust Estate, 1063 Calvert Bidg., awarded contract to Herbert J. West Construction Co., 16 St. Paul St., Baltimore, to erect warehouse at 211-13 W. Pratt St.; concrete construction; 37x154 feet; fireproof; freight elevator; plans by Archer & Allen, Central Savings Bank Bidg., Baltimore. (Recently noted.)

Mo., Kansas City.-J. W. Jenkins' Sons & Co., Houston, Tex.

Music Co., 1013 Walnut St., will erect six-story warehouse and storage building; 49½x 115½ feet; awarded contract at \$90,000 to Harvey Stiver, Kansas City, for erection and to Kansas City Structural Steel Co., Kansas City, for steel frame; foundation and frame to carry nine additional stories; steel frame, fireproofed with concrete; front finished in white brick and enameled terra-cotta; concrete floors; two passenger and two freight elevators; plans by Smith, Itea & Lovitt, Kansas City.

Tex., Galveston.—Southern Pacific Termi-

Tex., Galveston.—Southern Pacific Terminal Co., Houston, Tex., will expend \$65,000 to erect reinforced concrete warehouse; 70x100 feet; electric wiring in conduits; contract recently noted awarded to William Pearson

## RAILROAD CONSTRUCTION

#### RAILWAYS

RAILWAYS

Ala., Eufaula.—A. H. Merrill, vice-president of the Eufaula & Chattahoochee Valley Railway Co., writes that its proposed line is 150 miles from Pittsview, Ala., via Eufaula, to St. Andrews Bay, Fla., through level country. The company has just organized, the other officers being J. P. Foy, president; W. L. Wild, secretary and treasurer; general manager and chief engineer are yet to be appointed. Officers and directors are at Eufaula. Mr. Wild writes that 21 miles are to be built as soon as possible from Pittsview to Eufaula, including two steel bridges, one near Eufaula and the other near Pittsview; route level; not decided when bids will be received. will be received.

will be received.

Ala., Falco.—J. R. McLane, general manager of the Florida, Alabama & Gulf Railroad Co., which recently obtained a charter, writes that the line from Falco, Ala., to Galliver, Fla., 26 miles, is completed and trains are running. The other officers and incorporators are W. K. Hyer, Jr., president; W. A. Blount, vice-president; W. K. Hyer, treasurer, and R. A. Hyer, secretary.

Ala., Mobile.—The Tombighee Valley Rail-

Hyer, treasurer, and R. A. Hyer, secretary.
Ala., Mobile.—The Tombigbee Valley Railroad, it is announced, has begun operating its line from extension from Gilberttown to Toxey, and has laid track two miles north of the latter. The Alabama, Tennessee & Northern Railroad, with the same owners, has been extended south from York to Ward, 10 miles. Between Ward and the end of track north of Toxey, about 25 miles, the grade is completed and track is to be laid, which will connect the two roads and make a through line from Mobile, Nannahubba Bluffs and Calvert, Ala., to Reform, on the Mobile & Ohio in Pickens county, Ala., John T. Cochrane of Mobile is president.
Ala., Mobile.—The Mobile Interurban Mo-

Mobile & Ohio in Fickens county, Ana. John T. Cochrane of Mobile is president.

Ala., Mobile.—The Mobile Interurban Motor Railway Co. is reported organized by C. V. Shoub of Wellsville, O., with \$25,000 stock subscribed, for construction from the terminus of the Spring Hill line of the Mobile Light & Railway Co. to the Pinchurst subdivision, about two miles. Right of way is obtained. Incorporation papers will be filed. C. C. Meechem of Mobile is president; A. H. Brinkman and Dr. J. D. Atkins, members of the board. Others mentioned as interested are J. J. Dowling of Steubenville, O., and Henry Delaney of Pennsylvania. Construction will begin about October 1.

Ark., Heber.—The Missouri & North Arkansas Railroad, which is to locate its shops at Heber, will, it is reported, build two or three miles of switches and sidetracks. George L. Sands is vice-president at Eureka Springs, Ark.

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Ark., Marmaduke.—A. E. Randol, secretary and treasurer of the Talley Timber & Transportation Co., Marmaduke, Ark., writes that the railroad, which is now six miles long, is being extended one mile, and it is hoped to further extend it to Senath, Mo., to connect with the Frisco System. Route level. W. E. Talley of St. Louis is president, and John M. Gale of Marmaduke, vice-president and general manager. (Reported last week under head of Paragould, Ark.)

head of Paragould, Ark.)

Ark., Malvern.—J. B. Berry, chief engineer of the Rock Island lines, Chicago, writes that contract has been let to the C. H. Sharp Contracting Co. of Kansas City for the construction of about 55 miles of new line from Malvern to Kent, Ark. The latter point is on the St. Louis Southwestern Railway, near Camden, and the new road will open up a timber region.

Ark., Rogers.—The Kansas City & Mem-

Ark., Rogers.—The Kansas City & Mem-phis Railroad, formerly the Arkansas, Okphis Railroad, formerly the Arkansas, Other lahoma & Western, is reported to have com-pleted its line from Cave Springs to Tonti-town and Elm Springs, seven miles. Ex-tensions proposed are to Memphis, Tenn., about 250 miles; from Monte Ne to Ovid, Ark., about 19 miles, and from Siloam

Springs to Wagoner, Okla., about 65 miles. G. D. Locke is president and general manager, and Mr. Hays, chief engineer at Rogers, Ark.

Fla., Pensacola.-Charles W. Merritt Pensacola is reported pushing work on his contract upon the Gulf, Florida & Alabama Raiiroad, in which Megargel & Co., 5 Nassau St., New York, are interested. The contract covers 18 miles, it is stated, and about five miles are completed.

five miles are completed.

Fla., Tampa.—T. P. Bell, secretary Atlantic, Okeechobee & Gulf Railway Co., Tampa, confirms the report that contract has been awarded to the W. K. Palmer Company, engineers, Kansas City, to survey the proposed lines, 308 miles long, all in Florida, survey to begin by October 9. Headquarters of the road in the Franklin Square Office Bidg., Tampa, with Mr. Bell in charge. Hiram McElroy, chief engineer for the railroad also has office there. H. C. Ferriot, president, divides his time between Tampa and New Orleans, at which latter city the office is in the Audubon Bidg. the Audubon Bldg.

Ga., Dublin.-Citizens of Dublin will organize a company to build a street railway and an illuminating-gas plant. Street railway will be about four miles long. Address R. M. Martin for particulars.

R. M. Martin for particulars.

Ga., Eiberton.—A dispatch says that the Eiberton & Eastern Railroad Co., W. O. Jones, president, has been authorized by its stockholders to issue \$300,000 of bonds for the construction of its proposed line from Eiberton to Tignall, about 12 miles.

Ga., Whigham.—J. R. Munroe of Abbeville, Ga., and Z. W. Belk of Whigham, Ga., have purchased timber lands and will probably build railway from Whigham to Camilla or Albany, Ga., via Newton.

Ky., Carrollton. — James Gayle, general manager of the Carrollton & Worthville Railroad, says there is a movement on with some parties that he is associated with to build and equip a traction line from Carrollton to Covington, Ky., about 55 miles.

ton to Covington, Ky., about 55 miles.

Ky., Paducah.—Concerning the Kentucky Southwestern Electric Railway, Light & Power Co., which recently obtained a Delaware charter, Maj. W. A. Calhoun, chief engineer, Paducah, Ky., writes that the proposed line is to be 140 miles long from there to Union City, Tenn. Route is not decided. H. C. Rhodes is president, E. F. Wheaton vice-president and general manager, R. H. Scott treasurer and John D. Smith secretary. Major Calhoun adds that he is making preliminary survey and commercial retary. Major Calhoun adds that he is making preliminary survey and commercial report on the line. When these are completed it is intended to make a location survey, and it is anticipated that construction will begin next year. A dispatch from Indianapolis says that the American Traction & Power Co. organized there will be a holding company for the Kentucky Southwestern Railway, Light & Power Co. and others. President, E. F. Brubaker of Indianapolis; first vice-president, E. F. Wheaton of Henderson, Ky.: second vice-president, W. A. Calhoun of Buffalo, N. Y.: third vice-president, John Francis of Cedar Rapids, Ia.; secretary, G. E. Bruce of Indianapolis; treasurer, H. P. Dew of Blacksburg, S. C. La., Cooksville.—The Southern Railway &

treasurer, H. P. Dew of Blacksburg, S. C.
Ls., Cooksville.—The Southern Railway &
Navigation Co., Pullman Bldg., Chicago,
which proposes to build a railroad 75 miles
long from Natchez, Miss., to Alexandria,
La., says that the date for opening construction and equipment bids is indefinite.
Route is level. One steel bridge, 750 feet
long, will be required. D. K. Jeffris is
president; Marvin Hughitt, Jr., vice-president; P. J. Jeffris, secretary and treasurer,
and Howard Coles, general manager.

Md. Frederick.—The Frederick Railroad

miles. O. B. Coblentz is chief engineer at Frederick, Md.

Md., Hagerstown.—The Western Maryland Railroad, says a dispatch, will build addi-tional tracks in its yards at Hagerstown. H. R. Pratt, Baltimore, is chief engineer.

II. R. Pratt, Baltimore, is chief engineer.

Miss., Natchez.—A dispatch says that preilminary survey is made for the line between

Natchez and Woodville, otherwise the Woodville loop, and that it will shorten the Illinois Central route between Natchez and New

Orleans, 28 miles. A. S. Baldwin is chief
engineer at Chicago.

Mo., Chillicothe.—Referring to the late report that the construction of an electric railway between Cainesville and Chillicothe, 47 miles, was contemplated, Mayor Chris Boehne says that the plan has not developed sufficiently to give particulars.

Mo., St. Joseph.—A dispatch says that the Kansas City, Clay County & St. Joseph Rail-way Co. has been granted the franchise re-quested in Buchanan county. Charles F. En-right of St. Joseph is promoter.

N. C., Durham.—The Durham & South Car-olina Raiiroad Co. is reported to have filed mortgage to secure \$500,000 of bonds for remortgage to secure \$300,000 of bonds for re-funding, improvements and extensions. Sur-veys have been made for an extension to timber land. E. Williams is president at Lynchburg, Va., and R. A. Honeycutt, Dur-ham, N. C., is general superintendent and chief engineer.

N. C., Gatesville.—L. L. Smith of Gatesville and others are reported working to secure an extension of the Norfolk and Southern Railroad from Beckford Junction to Gatesville, about eight miles, which, it is understood, the company is contemplating. F. L. Nicholson is chief engineer at Norfolk Vic folk, Va.

Okla., Muskogee.—President A. A. Alien of the Missouri, Kansas & Texas Railway is reported saying that plans are being pre-pared to lower tracks at grade crossings be-tween Muskogee, Okla., and Denison, Tex., and that work will cost about \$6,000,000.

okia., Tulsa.—The Frisco, says a dispatch, contemplates building a cut-off on its Red River division from Dawson to Mounds, 16 miles. F. G. Jonah is chief engineer of construction at St. Louis, Mo.

Okla.. Woodward.—The Wichita Falis & Northwestern Railway is reported to have completed grading on its extension from Hammon to Woodward, about 60 miles.

S. C., Charleston.-The Southern Railway s. C., Charleston.—The Southern Railway is reported to have begun construction of new freight yards about 1½ miles west of the Six-Mile yards, and they will be of about 800 cars capacity. W. H. Wells is chief engineer of construction at Washington, D. C.

 C., Greenville,—The Greenville & Augusta Construction Co. of Greenville, capital \$5000, has been chartered and is granted authority to build and own a railway, which is thority to build and own a railway, which is presumably the proposed Greenville, Greenwood & Augusta Railway, for which a charter was obtained last year. The incorporators are J. P. Charles, W. A. Briggs, Jr., and J. T. Blassingame, all of Greenville. Mr. Charles was one of the incorporators of the railway. (See Manufacturers Record, September 15, 1910.) A late report says that construction has begun 13 miles south of Greenville on clearing the route of the old Carolina, Knoxville & Western Railroad, which will be used for most of the way. Route is from Greenville via Ware Shoals, Greenwood, Ninety-Six and either Johnston or Edgefield to Augusta, about 100 miles. Henry Briggs and Frank Hammond of Greenville and J. C. Fossett and Henry La Zimmerly of New York are also mentioned. Survey is progressing.

Survey is progressing.

Tenn., Bristol.—B. L. Dulaney, president, writes that the Bristol Traction Co. has purchased the Bristol Belt Line and the Holston Valley Railway from Bristol to Big Creek Park on the Holston River. There are 16 miles now operated and 3 miles under construction. Fred Dulaney is vice-president and general manager, and N. D. Buchanan, Jr., treasurer.

Tenn., Jackson.—The Birmingham & North-western Railway Co. has called a stockhold-ers' meeting at Jackson to act upon a pro-posed issue of first mortgage 5 per cent. bonds at the rate of \$17,500 per mile on the line constructed and to be constructed. John L. Wisdom is president and R. F. Spragins secretary.

Spragns secretary.

Tenn., Knoxville.—The Southern Railway has let contract to H. Kreis & Son of Knoxville for the extension of about 5½ miles form Knoxville along the Holston River to Marble Quarries. W. H. Wells, Washington, D. C., is chief engineer of construction.

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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the Louisville & Nashville Railroad, to favette, Tenn., and Burnside, Ky., about 10 nnecting with the Oueen & Cres miles, connecting with the Queen & Crescent Route, is reported organized thus: J. L. Hol-land, president and general manager; Dr. P. East, vice-president; J. M. McDonald, secretary; J. M. Hodges, treasurer; W. H. Whorley, chief engineer, and Robert L. Whorley, chief engineer, and Robert L. Morris, general counsel. The incorporators Morris, general counsel. The incorporators are Robert L. Morris and W. H. Whorley of Nashville, J. M. Hodges and A. V. Louthan of Westmoreland; J. L. Holland, P. East, M. S. Freeman, J. M. McDonald and S. M. Johnson of Lafavette.

Tenn., Memphis.-The Missouri & North Arkansas Railroad is reported buying prop erty in Memphis to build freight terminals, and either its own extension will be con-structed from Wheatley, Ark., about 69 Ark., about ent will be ma miles, or a traffic arranger with the Rock Island System from rge L. Sands is vice-president at Eureka

Tenn., Memphis.—The West Tennessee Traction Co., capital \$100.000, has applied for charter to build the proposed line from Memphis via Jackson to Nashville, Tenn., about 200 miles. W. K. Burton, president of the enterprise, which has been planned some time, is quoted saying that it will be reorganized. time, is quoted saying that it will be reorganized and work begun; incorporators, E. Oppenhelmer, A. G. Riley, Alfred Sohm, C. L. Winchester and W. W. Swift.

Tex., Aransas Pass.—E. O. Burton of Buron & Danforth, San Antonio, Tex., says that five miles of grade is ready for the ties or the line of the Aransas Harbor Terminal Railway, which will be six miles long from Aransas Pass to Port Aransas. Alexander Brown & Sons of Baltimore are forming an underwriting syndicate for the bonds of the company, but final contract not yet closed The latter firm, which confirms this state says that the proposition is as yet

Tex., Comanche.-W. L. Sage of Comanche Tex., Comanche.—W. L. Sage of Comanche is reported promoting plans to build a railroad from Port Arthur, Tex., to Tucumcari, N. M., which is on the Rock Island system and also on the El Paso & Southwestern Railway. It will be several hundred miles

Ter Dallas Concerning the report that the company would soon begin construction, Ben B. Cain, vice-president and general manager of the Gulf, Texas & Western Railway Co., writes that arrangements are not perfected to begin work, but those inhave never altered their intention to build from Seymour west toward Lub-bock, and East from Jacksboro to Dallas, with branch to Fort Worth, as mentioned.

Tex., Sherman. — A dispatch says that Mayor John C. Wall, C. B. Dorchester, C. C. Mayhew and Joe F. Etter have made ar-rangements to have survey for an interurban railway between Sherman and Paris, about

Smithville.-W. R. Searcy confirm Tex., Smithville.—W. R. Searcy connrms report that it is proposed to build a railroad from Smithville to deep water at Aransas Port, but a good, safe, practical man to head the enterprise is desired. Right of way, terminals, permanent surveys and estimate the statement of the s mates of cost of construction, together with subscriptions for \$350,000 bonus, secured.

Va., Hampton.-Sidney Johnston Dudley is reported saying that \$200,000 capital sured for the proposed railroad from Hamp-ton to Yorktown, Va., provided \$75,000 is sub-scribed locally. Options on right of way are being secured. Prominent financiers and railroad men are said to be looking into the

, Alpine.—The press report that is City, Mexico & Orient Railway s report that t Tex., Alpine. build an entension into the Shafter silver region is officially denied.

Tex., Dallas .- A dispatch from Fort Worth Tex., Dallas.—A dispatch from Fort Worth says that the Stone & Webster Engineering Corporation, Mark Lowd, manager at Fort Worth, has awarded contract to Denison & Ramsey of Lubbock, Tex., to build the proposed interurban railway from Dallas to Waxahachie. Grade is to be done by Janu-

Tex., Fort Stockton .- W. W. Colpitts, chief orient Railway, says there is nothing in the press report that the company would build n extension from Fort Stockton to Pecos

W. Va., Clarksburg.—The Fairmont & Clarksburg Traction Co. is reported to have put in service its seven-mile extension to Mount Clare, this being part of the proposed line to Weston, about 25 miles.

W. Va., Morgantown.—The Monongalia & Marion Railway Co. is reported chartered to build an electric railway from Morgan-

town to Fairmont, about 18 miles. Capital \$50,000. The incorporators are John Madi-gan, M. E. Fetty, Parker S. Johnson, Sanford Barrickman and John E. Price, all of

#### STREET RAILWAYS

Ala., Tuscaloosa.—Reported that application will be made by F. G. Blair and Henry Hattlesburg Street Railway.

B. Foster for a franchise for an electric street railway.

Miss., Laurel.—Franchise for an electric street railway, says a dispatch, has been granted to P. H. Saunders and S. M. Jones, three miles to be completed and in operation by April next. They are said to represent Henry L. Doberty & Co., 60 Wall St., New nired control of the

# MACHINERY, PROPOSALS AND SUPPLIES WANTED

Manufacturers and others in need of machinery or supplies of any kind manufacturers and others in accu of machinery or supplies of any same requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery or supplies needed we will make their wants known free of cost, and in this way secure the attention of manufacturers and dealers throughout the country. The Manufacturers Record has received during the week the following particulars as to machinery and supplies wanted.

Agricultural Implements and Sup- falo, N. Y., wants parts or materials for plies .- Mark Kartoschinsky, Rostoff a Don Russia, is interested in information and prices on pumps; sprays of various kinds, including Climax and Triumph; oll cans for use on agricultural machinery, hemp twine,

Railway Co., L. W. Anderson, chief engineer, Pecos, Tex., will receive bids on air com-

Automobile Tools. -- See "Machine Tools.

Boiler .- Houston Packing Co., Houston 350-horse-nower

Boller.-Epileptic Colony, Abilene, Tex., 150-horse-power (Heine Safety preferred) for steam-heating

Bricks.-Southern Steel Products Co. chmond, Va., wants to correspond with nanufacturers of brick; view to representa-

Construction amissioners, A. C. Ward, chair nan, Bartlesville, Okla., will receive bids until 5 P. M. October 16 for construction of bridges in various parts of county; s and specifications on file with J. C. chell, County Clerk; bids to be opened

Bridge Construction.—Bids will be received at office of Dan C. Smith, Jr., City elved at office of Dan C. Smith, Jr., City omptroller and City Secretary, City Hall, Houston, Tex., until noon November 29 for construction of two reinforced concrete bridges over White Oak Bayou and branch of White Oak Bayou. Specifications and plans, bidding blanks, etc., may be obtained from F. L. Dormant, City Engineer, upon deposit of \$5; certified check for \$1500, payable to H. B. Rice, Mayor, to accompany each bid; F. L. Dormant, City Engineer.

Bridge.—Fernwood Lumber Co., Fernwood, Miss., wants steel drawbridge complete; 100-foot span; total length 225 feet; to carry two 100-ton locomotives complete. er drawing train weighing three

Brooms.-The Racket, W. H. Jennings roprietor, De Funiak Springs, Fla., wants o correspond with broom manufacturers ho sell to jobbing trade.

Building Materials.-M. Little, L pasas, Tex., wants prices on building mate-rials, including steel ceiling and steel leth partitions for hotel at Corpus Christi.

Building Materials .- F. J. Orr, Athens, will want prices on metal cas

Building Materials .- W. C. Bellinger. Gadsden, Ala., wants prices on finished lum ber, sash, doors and blinds, shingles, face brick and stone.

Building Materials.-Barnwell & Jones hattanooga, Tenn., want catalogues on uilding materials of interest to architects.

Building Materials .- Ugland & Bankitz, Catherinenstrasse 31, I., Hamburg, Ger nany. wants to represent manufacturers of novelties in building materials in Belgium, Holland, Scandinavia and Germany; prefer-ably for dock yards, rallway wagons, ship

and Button Parts. - See Buttons Clothing, Materials, etc.

Car Seals.-W. F. Stone, Medora, Ill., wants addresses of manufacturers of car

Carbonators .- See "Soda Fountain, etc." Cars. See "Locomotive and Cars.

Clothing, Materials, etc.—P. L. Boswell, care F. J. Boswell, 327 Elicott Sq., Buf-

boot, shoe and clothing manufacturers, such boot, shoe and clothing manufacturers, such as tallors' trimmings, buttons, etc., suspen-der materials, the and umbrella materic's, rubber, boots, shoes and mackintoshes; also wants addresses of manufacturers of finished articles who desire to work up trade with Australia

Collapsible Tubes.-J. C. Davis, Sylafacturers of collapsible tuber

Concrete and Cement Construction. Broom Co., Willet Groover, s urer, Jacksonville, Fla., wants with contractors of reinforce Merchants' Bro concrete and cement or ironclad work.

Concrete-pler Shells.-Fernwood Lui ber Co., Fernwood, Miss., wants shell for concrete pier 30 feet diameter, 60 feet high; also shells for four concrete piers 6 feet diam

Contractors' Equipment.-The Under ound Construction Co., Bank of Commerce dg., St. Louis, Mo. (present headquarters abold Hotel, Fort Worth, Tex.), wants machinery, tools, etc., for work on Fort Worth dam and reservoir. (This company recently noted to have received contract for earth embankment and masonry section.)

Die-sinking Machine. - See "Naval

Drainage.-Sealed proposals received by ners of Drainage District No. W. C. Hudson, secretary, Jefferson county, Arkansas, at office of Bridges & Wooldridge, attorneys, Pine Bluff, Ark., until 12 noon Oc-tober 16 for construction of drainage canal; 81/2 miles main canal; 265,000 cubic yards excavation; maps, profiles and specifications obtained upon application at office of White & Watson, engineers, Pine Bluff; certified check for \$300; rights reserved.

Electric-light Plant .- L. L. Davenport Nashville, N. C., wants prices on electric wachinery and fixtures for lighting purposes dso estimate on cost of installing electric light plant; population 1000; growing town

Towing Locomotives. ealed proposals received at office of General Purchasing Officer, Isthmian Canal Com-sion, Washington, D. C., until 10.30 A. November 20, and then publicly opened, slon, Washington, D. C., until 10.30 A. M. November 20, and then publicly opened, for furnishing by steamer, free of charge, on dock nt Colon (Atlantic port) or port of Ancon Balboa, Canal Zone, Pacific port), Isthmus of Panama, electric towing locomotives for of Panama, electric towing locomotives for canal locks. Blanks and general information relating to this circular (No. 650) may be obtained from this office or offices of assist ant purchasing agents, 24 State St., New York; 614 Whitney-Central Bidg., New Or-leans, and 1986 North Point St., San Fren-cisco; also from U. S. Engineer offices in Seattle, Low Angulor, Publicated cisco; also trom U. S. Engineer offices in Seattle, Los Angeles, Baltimore, Philadel-phia, Pittsburg, Boston, Buffalo, Cleveland, Cincinnati, Chicago, St. Louis, Detroit, Mi-waukee, St. Paul, Chattanooga, Louisville, Mobile and Galveston; Commercial Club, Kansas City; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash.; Chamb . B. Chandler, care of Wm. Simon Co., Renfrew, Scotland; bids to be marked "Proposals for furnishing material under Circular No. 650, to be opened November 20." F. C. Boggs, Major, Corps of Engineers, U. S."A., General Purchasing Officer.

Electrical Machinery.—Potomac Milling & Ice Co., Keyser, W. Va., wants prices on small generator for lighting purposes.

Electrical Machinery .- See "Railroad Construction Materials and Equipment.

Electrical Machinery, etc.-Navy De partment, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until October 17 for furnishing electrical telephone pole supplies, 9909 feet of r covered wire, etc., and 18,000 feet of we proof wire, schedule 3953; delivery yard, Washington, D. C.; also until O oof wire, rd, Washington, D. c., for furnishing three electric soldering ts, schedule 3941; delivery Navy yard, Ner-for schedules apply navy pay folk, Va.; for

Elevator.-John Martin, Clarksville, Ga. eive bids on elevator for cotton

Engine.-Gilbert Industrial College, J. R. eynoids, principal, Baldwin, La., wants oil distillate engine, about 15 horse-power, drive dynamo for lighting purposes,

Engineers. - See "Water-works Construc

Furnace Bullders.-See "Rolling-mill

Foundry Equipment, etc.-Re Prison Commissioners wants machine tools and foundry equipment for State peniten-iary system; prospective bidders can seem tiary specifications by addresing F. M. Nash, master mechanic, Huntsville, Tex.

Garage and Repair Shop Equip. ment .- Robinson Auto mobile Co inson, president, 174 King St., Charleston, S. C., wants new or second-hand equipment for garage and repair shop.

Gas Plant .- R. M. Martin, director Chamber of Commerce, Dublin, Ga., wants quota-tions on equipment for gas illuminating plant; population 7000.

Gas Engine.-Potomac Milling & Ice Co., Va., wants prices on gas en Gasoline Motors .- See "Locomotive and

Gasoline Engine .- J. P. Winston, Louis ourg, N. C., wants gasoline engine. 'Machine Tools, etc.")

Gasoline Engine.-John Martin, Clarks ville, Ga., will want gasoline engir

Ginning Machinery. — John Martin, Clarksville, Ga., will receive bids on 70-saw gin with feeder and condenser and singlebox self-tramping press with pulley drive Gravel.-Continental Construction Co., 331

Wilson Bldg., Dallas, Tex., wants local bids n about 1500 loads gravel.

Gyratory Crusher.-See "Mining Ma-

Heating Plant. - W. H. Henderson, hairman Board of County Commissioners, Canton, N. C., wants prices on steam or he eating plant. Heating Plant .- L. Baker, Gaffney S.

C., will receive bids on installation of steam-teating plant for two four-story buildings, to be heated from boiler in central building.

Heating Plant .- E. D. Bracy, 608 Main St., Little Rock, Ark., wants prices on hot air furnace

son, chairman Board of County Commis-sioners, Canton, N. C., wants prices on ater ram and piping.

Ice and Cold-storage Plant .- A. G. Lordley, Olympia, Ga., wants ton ice and cold-storage plans

Iron Instrument Shelters. - United States Department of Agriculture, office of the Secretary, Washington, D. C. Sealed proposals received by Secretary of Agriculuntil noon October 12 for construction and furnishing special iron instrument shelters for Weather Bureau, in accordance with drawings and specifications, which may be obtained from Chief United States Weather Bureau, Washington, D. C. Bids must be ealed and endorsed on envelope "Propos or Iron Instrument Shelters," and for Iron Instrument Shelters," and addressed to the Chief United States Weather Bureau, Washington, D. C.; rights reserved; W. M. Hays, Acting Secretary.

Lathe, etc.—Holt Engine Co., Jo Cook, president, Burlington, N. C. large lathe and miller.

Laundry .- J. D. Wyrick, Broadway and A St., Lenoir City, Tenn., wants prices on laundry equipment

Laundry Machinery .- Otto Clotfelte Conyers, Ga., wants addresses of laundry chinery manufacturers.

Laundry Machinery.-John G. Duncan Company, Box 265, Knoxville, Tenn., wants prices on second-hand laundry machiner for immediate shipment, including medium-sized washing machine, 72-inch mangle, combination shirt and collar froner, rebuilt and ond-hand.

Levee Construction. - Miller County Levee District No. 2, N. H. Williamson, secretary, Texarkana, Ark., will let contract at once to construct 38 to 41 miles of levee on west bank of Red River, embracing 101,281. acres; levee to begin at Texas State line and continue to one mile south of Garland, Ark.; 28, 1911.

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Arthur E. Morgan and L. L. Hidinger of Morgan Engineering Co., Memphis, Tenn., rgan Engineerin

Lockers.-F. J. Orr, Athens, Ga., will cant prices on gymnasium lockers.

sant prices on gymnasum lockers.

Locomotive and Cars.—Ed. E. Walker
& Co., 519 Madison Ave., Covington, Ky.,
mants addresses of manufacturers of gasoline
motor locomotives and passenger cars.

Machine Tools.—Pecos Valley Southern fallway Co., L. W. Anderson, chief engineer, Pecos, Tex., will receive bids on lathe, drill press, bolt cutter, etc.

Machine Tools, etc.—J. P. Winston, ogishurg. N. C., wants engine lugs (not less han eight feet between centers), dress ress, shaper, gasoline engine, automobile

Machinery Wanted .- Mayor and Board of Aldermen, Lexington, Miss., receive bids until October 18 for about 5½ miles 6 to 12-inch pipe sewers. (See "Water-works and

Malicable Iron Manufacturers.—Jas. J. Martin, Johnson City, Tenn., wants to correspond with maleable iron companies relative to placing order for manufacture of parts for patented oscillating cattle guard. Metals .- See "Naval Suppli

Mica Mills .- See "Mining Machinery."

Milling Machinery .- See "Lathe, etc." Milling Machinery.—See "Latte, etc."
Mining Machinery.—Texas Mica Co., C.
B. Rottke, manager, Pecos, Tex., will open
bids January 1 to Install hammer mills (Williams preferred) of 120 tons capacity; to
grind to fineness of six mesh; screens
(Wago preferred) to handle above capacity a four and six mesh ; also gyratory crusher me capacity

to a four and six mesh; also gyratory crusher of same capacity.

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until October 10 for furnishing 4000 pounds of sheet ashestos, 50,000 red brick, 200 barrels of Portland cement, 60000 pounds of unspun cotton, 500 feet of ouber fire hose, 2800 pounds of hydraulic leather and 700 pounds of skirting leather, schedule 3852; 40,000 pounds of recoil cylinders, 37,400 spring cylinders, 30,500 pounds spring and piston rods, 10,700 pounds of elevating screws and miscellaneous lot of recoil springs, schedule 3864; miscellaneous lot of phosphor-bronze springs, etc., and valve, springs, etc., schedule 3851; delivery Navyard, Washington, D. C.; for schedules apply may pay office nearest navy-yard.

Naval Supplies.—Navy Department, Bu-

nary pay office nearest navy-yard,

Naval Supplies.—Navy Department, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until October 10 for furnishing 400 yards of terry cloth, 3000 feet of magnesia pipe covering, 3000 feet of air hose, 500 feet flexible rubber hose, 38 leather acking tins, 900 square feet of upholstery leather and 10,000 pounds of oakum, schedule 356; 400 pounds rubber sheet packing, schedule 356; 400 pounds rubber sheet packing, schedule 355; delivery Navy-yard, Norfolk, Va.; also until October 10 for furnishing 35 stop watches, miscellaneous lot of copper wire and 3120 feet of steel wire, schedules 3590 and 3953; delivery Naval Observatory, Washington, D. C.; for schedules apply to navy pay office nearest navy-yard.

Naval Supplies.—Navy Deportment, Bu-

ply to navy pay office nearest navy-yard.

Naval Supplies.—Navy Deportment, Bureau of Supplies and Accounts, Washington, D. C., will receive bids until October 17 for furnishing 10 worm-geared chain blocks, schedule 3355; 2500 gallons of Japan drier and 250 gallons of lard oil, schedule 3358; delivery Navy-yord, Norfolk, Va.; also until October 17 for 24 iron wheelbarrows, schedule 351; miscellaneous lot of white oak and 200 chestnut felenbane pales, schedule 3552; 380. sol; miscellaneous lot of white oak and 20% chestnut telephone poles, schedule 3862; 380,-500 pounds of No. 1 steel castings and 27,500 pounds of nickel steel forgings, schedule 3861; 1300 pounds of cold-rolled steel, schedule 3861; die-sinking machine, schedule 3861; die-sinking machine, schedule 3866; delivery Navy-yard, Washington, D. C.; for schedules apply navy pay office nearest navy-yard.

011 Cans .- See "Agricultural Implements

Paving.—Board of Public Affairs, A. C. Jordan, chairman, Pine Bluff, Ark., will receive bids until 2 P. M. September 28 for constructing concrete sidewalks on Main, Georgia, Pine and other streets; W. A. Lee,

Paving.—Charles R. Kennedy, comptrol-ler, New Orleans, La., will receive bids until Il A. M. October 2 for surfacing with con-creting clay gravel Howard Ave. from Clai-borne Ave. to Broad St.; plans and specifi-cations on file with City Engineer; deposit 330; blank proposal forms furnished by City Engineer.

Paving.-City Council, Benjamin I. Gay, president, Palatka, Fla., will open bids October 3 to construct seven miles of vitrified brick pavement (laid flat), 16 to 24 feet wide;

granite or cement curb; also three miles hard surface or gravel, 12 feet wide; no curb; C. S. Stallings, City Engineer.

Piping.—John Martin, Clarksville, Ga., will require four and six-inch cast-iron

Piping.-See "Hydraulic Ram, etc."

Pump.-John Martin, Clarksville, Ga., will require pump, capacity 75 gallons per minute.

Pumps .- See "Agricultural Implements

Rails.—United Coal Mining Co., Terre Haute, Ind., wants light rail for immediate shipment

Raths.—Texas Mica Co., C. R. Rottke, manager, Pecos, Tex., wants 20 tons of relay-ing rails, 12 pounds per foot; will open bids January 1.

Railroad Construction Materials and Equipment.—Electric Railway, Light & Power Co., 609-10-11 City National Benk Bldg., Paducah, Ky., is interested in information and catalogues on machinery, grading, rails, ties, engines, etc., for proposed to-mile railway.

Railway Equipment.—Eufaula & Chat-tahoochie Valley Railroad Co., W. Lawrence Wild, secretary, Eufaula, Ala., will want prices on railway equipment.

Road Contsruction.—Lawrence County Commissioners, Moulton, Ala., will receive bids until 2 P. M. October 30 for grading, draining and surfacing with Tishoning gravel about 1½ miles of Hillsboro-Moulton Rd.; information furnished by W. E. Hotchkiss, resident engineer, Courtland, Ala.

Road Construction. — Pettis County Court, Sedalla, Mo., will receive bids until noon October 9 for construction of 3½ miles of rock road; plans and specifications on file with County Highway Engineer, Sedalia; contracts for seven additional miles will be left later.

Rond Construction.—N. B. Mills, chairman, Statesville, N. C., will receive bids until October 1 for grading about 17 miles of rond in Iredell county.

Road Construction.—State Highway Commission, Richmond, Va., will receive bids until noon October 7 for grading and graveling about one mile of road near Chickahominy River on Creighton Rd., in Henrico county; plans and specifications on file at office of commission; certified check \$250; P. St. J. Wilson, State Highway Commissioner.

Road Construction.—Road and High-way Commission, Marion, S. C., will award contracts for construction of 100 miles of sand-clay highway; work to be let in sec-tions of five miles and over.

tions of five miles and over.

Road Construction.—County Commissioners, Upper Mariboro, Md., will receive bids until noon October 3 for grading and macadamizing one mile of Queen Chapel Rd. between District line and Hyattsville; proposals to be made on forms furnished by State Geological Survey, 532 N. Howard St., to be obtained through its office, Baltimore, Md.; plans and specifications on file with County Commissioners; certified check \$200; Henry St. J. Briscoe, clerk.

Road Work.—Terrell County Commis-sioners, Sanderson, Tex., will receive bids until noon November 13 for following road sioners, Sanderson, Tex., will receive bids until noon November 13 for following road construction on Sanderson and Fort Stockton Rd.: 1840 linear feet of concrete curbing or wall, about 300 cubic yards, to be composed of one part cement and six parts of gravel, and placed on solid rock foundation; wall to be two and one-half feet wide at base, two and one-half feet high, and one foot wide on top, sloped from Inside as court directs, reinforced with barbed wire, specified in bid; 200 cubic yards of rock wall to straighten and increase width of road, and 60 cubic yards of fock curb on side of road; also 300 cubic yards of dirt filling bock of wall to level, 180 cubic yards rock to be blasted off bluff on upper side of road and removed to widen road, sufficient culverts (to be furnished by county) to carry water underground cross-road and small drainage ditch. For further information address J. B. Ross, County Judge.

ditch. For further information address of B. Ross, County Judge.

Rolling - mill Machinery. — United States Iron & Steel Co., 206 Prince Theater Bldg., Houston, Tex., wants addresses of companies to build two reheating furnaces for 18-inch rerolling rail mill at San Jachto Cite. Tex. City, Tex.

Roofing.—E. T. Murray & Co., Nashville, Tenn., want red rubberoid roofing.

Rope.—Clear Creek Coal & Lumber Co. Isoline, Tenn., wants 1000 feet one-inch haul

Rubber.-See "Clothing, Material, etc. Safe.—Southern Gypsum Co., North Hol-ston, Va., wants small second-hand safe. Sawmill Machinery.—Clear Creek Coal & Lumber Co., Isoline, Tex., wants second-hand heading sawing machine (Peter Gerlach or Trevor prefered); also second-hand drag saw for sawmill.

Screens .- See "Mining Machinery."

Scales.—John Martin, Clarksville, Ga., will receive bids on set of platform scales and set of swinging scales.

and set of swinging scales.

Sewer Construction.—Trustees of Harlan, Ky., will receive bids until September 30 for construction of 1400 feet vitrified pipe sewer on Central St. from Central and 3d Sts. to Cumberland River; sewer consists of 250 feet of 12-inch, 250 feet 15-inch, 900 feet 18-inch pipe and 25 feet concrete in river, with necessary manholes, etc.; specifications on file with Board of Trustees at office of F. F. Cawood and at First National Bank of Harlan; also at First State Bank, Pineville, Ky., and Middlesboro National Bank, Middlesboro, Ky.; certified check \$100; R. A. Baker, chairman Board of Trustees; Will Ward Duffield, clerk pro tem.

Sewer Construction.—Bids for con-

sewer Construction.—Bids for con-struction of Rock Creek joint district sewer. First section will be received by city of St. Louis, Mo., Room 300, New City Hall, until noon October 6. Plans, specifications, form of contract and other information can be had at office Board of Public Improvements.

Sewer Construction.—J. B. Winslett, City Secretary, Dallas, Tex., will receive bids until 3 P. M. October 6 for constructing sories of storm-water sewers on Pennsyl-vania, Warren or Belle and Colonial Aves., from Forest Ave. to Whittaker St.; 15-inch vitrified pipe to 80-inch plain concrete pipe; plans and specifications on file with City Secretary; certified check \$500.

Shirts.—The Racket, W. H. Jennings, pro-prictor, De Funiak Springs, Fla., wants to correspond with shirt manufacturers who ell to jobbing trace.

Shoes and Shoe Materials .- See "Cloth ne Materials, etc.

Shuttle Blocks.-Ernst Bunge, 124 Boule vard De Strasbourg, Le Havre, Seine Infre-France, wants to correspond with manufac-turers of dogwood and persimmon shuttle

Soda Fountain, etc.—H. M. Wade Man-ufacturing Co., Charlotte, N. C., wants to correspond with manufacturers of soda-fountain units, draft stands and carbonators, soda-fountain supplies, etc.

Co., Keyser, W. Va., wants prices on structural steel for 100x90-foot building.

Turpentine Plants, etc.—R. E. Schurtz, Cameron, Mo., wants information, catalogues and prices on wood alcohol and by-products plants; also on steam and destructive distillation turpentine plants.

Time Clock.—Southern Gypsum Co., North Holston, Va., wants time clock. Tin Tubes.—See "Collapsible Tubes."

Twine.—See "Agricultural Implements nd Supplies."

Umbrella Materials.-See "Clothing.

Vacuum Cleaner.—F. J. Orr, Athens, Ga., will want prices on vacuum cleaners

Vulcan Fiber.—Ugland & Bankwitz, Catherinenstrase 31, I., Hamburg, Germany, wants to correspond with manufacturers of vulcan fiber with view to representation in Belgium, Holland. Scandinavia and Germany.

Water-distilling Plant. — Anderson Company, 925 College St., Little Rock, Ark., wants to correspond with manufacturers of complete distilled-water equipment to pro-duce chemically pure product.

Water-works Construction.—City of Grafton, W. Va., W. C. Hanway, clerk, wants to correspond with engineers relative to in-stallation of new water system; \$90,000 bond

Water-works and Sewers.—Bids received until October 18 by Mayor and Board of Aldermen, Lexington, Miss., for about 5½ miles 6 to 12-Inch pipe sewer system; also water-works system comprising two flowing artesian wells, reservoir, steel tank and tower, steam or gasoline pumps, bollers, and about six miles 6 to 10-inch cast-iron mains, with hydrants and valves. For specifications address W. G. Kirkpatrick, engineer, Jackson, Miss.

Well Drilling.—Arthur Charbonnet, Cit-izens' Bank Bidg., New Orleans, La., wants information on boring oil well.

Wood Alcohol Plants.—See "Turpen-ine Plants, etc."

Wheelbarrows .- See "Naval Supplies."

Woodworking Machinery. - J. N. Welch, Cecil, Ga., will want second-hand variety works machinery.

Woodworking Machinery.-See "Saw

soda-fountain supplies, etc.

Spraying Machinery.—See "Agricultural Implements and Supplies."

Stave Mill Machinery.—C. E. Brown. R. F. D. No. 1, Swetnam, Va., wants cylinder stave saw, equalizer and two stave jointered second-hand if in good condition.

Structural Steel.—Potomac Miling & Ice

Mill Machinery."

Wreck Removal.—U. S. Engineer Office, Jacksonville, Fla. Sealed proposals for removing wreck of steamer Zeeburg from St. John's River, Florida, received at this office until 12 M. October 20. Information on application. J. R. Slatiery, Captain, Engineers.

Wooddworking Machinery.—See "Steve Mill Machinery."

# INDUSTRIAL NEWS OF INTEREST

Transfers Office to New Orleans.

The Creosoted Wood Block Paving Co., Gulfport, will change its office October 1 to 917 Maison Blanche Bldg., New Orleans.

#### Wants Southern Agents.

Wants Southern Agents.

An advertiser, No. 863, in our Classified Opportunities columns, wants to establish arrangements with Southern agents for handling a well-known line of crushers. The crushers are for wet or dry grinding of any materials. It is especially adapted for phosphate and cement rock, coal, oyster shells, etc., and all pulverizing operations.

#### The Cincinnati Equipment Co.

The Cincinnati Equipment Co.

The Cincinnati Equipment Co., Cincinnati, has recently occupied a new suite of offices in the Mercantile Library Bidg. It will continue to deal in contractors' equipment of all kinds commonly used in railroad construction work, excavation, grading, etc. Extensive lines of steam shovels, cars, locomotives, box cars, flat cars, coal cars, holsting engines, rails, etc., are carried. engines, rails, etc., are carried.

#### Ice-Making and Refrigerating Plants

Ice-Making and Refrigerating Plants
The many forms of cold storage and the
appliances and machinery are supplied and
installed by John Hague, Granite Bidg., St.
Louis. He is a general refrigerating engineer, designing, contracting for and supervising refrigerating and lee-making plants.
These plants include cold storage for hotels,
restaurants, hospitals, residences, markets,
dairies, ice-cream manufacturers, ice-water
plants, packing-houses and all applications
of mechanical refrigeration.

#### Turbo-Pumps for Marine Service.

The steamship "Sierra" will be equipped with a Terry turbine manufactured by the Terry Steam Turbine Co. of Hartford, direct

connected to a centrifugal boller-feed pump. This use of the turbo-pump set for boller feed in marine service and the report of its performance are of special interest. Each year witnesses a large increase in its use for stationary boller-feed pump drive, and its extension to marine service is a matter of considerable importance.

#### Wants Quick Purchaser of Land.

Wants Quick Purchaser of Land.

A tract of 1500 acres, including iron-ore land, 200 acres of rich river bottom farming land and 1300 acres covered with virgin timber, is offered for sale at \$45,000 by F. Marion Thomason, 405 Gould Bldg., Atlanta, Ga. This land, in addition to iron ore, contains good marble. It is on the Etowah River, 50 miles north of Atlanta. The Louisville & Nashville Railroad and public roads pass through it. It is to be sold at what is said to be a sacrifice in order to make division for heirs.

#### Ruggles-Coles Dryers for Minerals.

The Ruggles-Coles Dryers for Minerals.

The Ruggles-Coles Engineering Co., 50
Church St., New York, builders of the wellknown Ruggles-Coles dryers, recently secured
the order from the American Vanadium Co.,
Bridgeville, Pa., for one of its indirect class
"B" dryers for drying vanadium without
loss of dust. Another complete plant for
drying and grinding feldspar has been designed by this company for the Bedford
Feldspar Co., Bedford, N. Y. The capacity
of this plant will be fifty tons 180-mesh feldspar per day. spar per day.

#### Warner Equipment Co.'s Announcement.

The Warner Equipment Co., Cullom's Station, Cincinnati, has purchased the factory of the Cincinnati Equipment Co. and will continue in the equipment business and in

In writing to parties mentioned in this department, it will be of advantage to all concerned if the Manufacturers Record is mentioned.

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the operation of its factory, giving particuthe operation of its factory, giving particu-lar attention to repair work on steam shov-cls, locomotives and contractors' machinery. Contractors' outfits will also be stored in the company's storerooms. P. B. Warner, the company's storerooms. P. B. Warner, formerly of the Cincinnati Equipment Co., president of the new company and John R. Warner is secretary and treasurer.

#### Establish Offices in Atlanta.

The Bibb Brick Co. and the Bibb Sew Pipe Co., both of Macon, Ga., will open sell october 1. Mr. John Kelley is in charge of the sale of brick and sewer pipe of these companies and proposes to extend the sales in the territory tributary to Atlanta.

## Establishing Electrical Supply Busi-

Edw. Jumonville, secretary-treasurer of the Interstate Electric Co., Ltd., of New Orleans since its organization in 1903, and Reynolds Yundt of the same organization, making arrangements to go electrical-supply business in New Orleans.

#### Ward Equipment Co.'s Atlanta Office.

The Ward Equipment Co., 139 Cedar St. The Ward Equipment Co., 189 Cedar St., New York, maker and patentee of the Ward steam heat and ventilating system for pas-senger coaches, has opened an office in At-lanta, Ga., in charge of L. B. Rhodes, Candler Bidg. The Southern territory will be reached by Mr. Rhodes, who was for a num-ber of years master mechanic of the Georgia Southern & Florida Railroad. Later he was ler Bldg. superintendent of motive power of the Virginia Railroad and has had wide experience in the railroad business

#### Contracts for Security Cement.

Security Cement & Lime Co., Equi table Bldg., Baltimore, has recently closed contracts for sale of 1000 barrels Security Portland cement to be used by Arthur Cov sill on the construction of the United State wireless station tower at Fort Myer, V. The cement will be supplied through the Rosslyn Milling Corporation, Rosslyn, Another contract is for 2500 barrels of Se-curity Portland cement for use in the con-struction of the Crownsville Hospital, Crownsville, Md., by John Waters, contractor, of Baltimo

### Goulds Company's Chicago Branch.

A branch of the Goulds Manufacturing Co A branch of the Goulds Manufacturing Co.

of Seneca Falls, N. Y., has been established
at Ohlo and Franklin Sts., Chicago, to
handle its products in the middle Western
territory, including the States of Indiana, Illinois, Michigan, Wisconsin, Minnesota and The products to be exploited include a new line of volute centrifugal pumps made in the Seneca Falls factory, as well as its complete line of hand-lift pumps, force pumps, windmill pumps; spray pumps, both pumps, windmin pumps; spray pumps, not hand and power; triplex power pumps, ro-tary pumps, centrifugal pumps, air com-pressors, vacuum pumps, and all types of equipment for pumping service.

#### "Cylinder" Gate Turbine Water-Wheels

The Davis Foundry & Machine Works, Ga. has recently furnished the city onewall, Okla., with one of its improved der" gate turbine water-wheels in and iron penstock with feeder pipe, for driving the water-works pump city. A pair of horizontal "cylinder that city. turbine te turbine wheels in steel penstock has en shipped to the Lexington Electric Light Power Co., Lexington, S. C., to operate the company is building two "cylinder" gate turbines for the city of Elberton, Ga., for ight and power plant

#### Buffalo Steam Pumps Decrease Insurance

It is stated that upon the installation of a new Buffalo steam fire pump recently or-dered by the city of El Paso, Tex., lower Insurance rates are to go into effect in that city. The pump that gives this additional fire protection is a 10-inch Buffalo threevertical turbine pump of submerged stage It will be placed at the bottom of a 50-foot well and driven by Westinghouse mo-tors at 850 R. P. M. It will deliver 3000 gal-lons per minute against a total head of 350 This pump is built in accordance with the requirements of the National Board of Fire Underwriters. The Buffalo Steam Pump Co., Buffalo, N. Y., has received the contract.

# Absorbed by Treadwell Engineering

E. R. Euston, vice-president of the Stoever Foundry & Manufacturing Co., who has been in charge of their New York office for the country.

past 10 years, will remove to their new plant at Easton, Pa., October 2. The Stoever Foundry & Manufacturing Co., having been absorbed by the Treadwell Engineering Co., will discontinue its New York office and plant at Myerstown, Pa., and in the future naintain general sales offices at Easton, Pa. maintain general sales omces at Easton, Pa., under the name of the Treadwell Engineering Co., where the line of pipe-threading, cutting and bending machines will be manufactured. The company also expects to add kindred lines of machine tools in the very near future.

#### Sales by the Geo. M. Newhall Engineering Co.

Among the recent sales of equipment to railroads and manufacturing companies by ranroads and manufacturing companies by the George M. Newhall Engineering Co., Philadelphia, and 50 Church St., New York, are the following: Three 120-ton wrecking cranes to the Baltimore & Ohlo Railroad Co.: one 120-ton wrecking crane to the New York Central Railroad Co.; two 30-ton trans fer cranes to Delaware & Hudson Railway Co.; one lifting magnet to Delaware & Hudson Railway Co.; two locomotive coaling cranes to Baltimore & Ohio Railroad Co. Railway electric wrecking crane to Boston Ele one electric wrecking crane to Boston Elevated Railroad; one 12-ton magnet locomotive crane to Norfolk & Western Railroad; one 20-ton locomotive crane to Pennsylvania Salt Manufacturing Co.; one 100,000-pound Riehle Bros. testing machine to Pennsylvania Railroad.

#### A \$20,000 Contract for Massee & Felton Lumber Co.

The contract for furnishing the bardwood. and ornamental hardwood doors Interior interior and ornamental nardwood doors, sash, blinds, etc., for the new half-million dollar hotel in Savannah has been awarded by the Chas. McCaul Co., Philadelphia, the general contractor, to the Massee & Felton Lumber Co. of Macon, Ga. The securing of tamber Co. or Macon, Ca. The securing or this contract gives emphasis to the impor-tance of this new department of the Massee & Felton company in the manufacture of splendid hardwoods found in the vicinity of Macon into "durable doors" and in finish. The contract amounts to \$20,000. and interior oak and other hardwood us very attractive doors and finish, for this hard, close-grained lun has been found to give a particularly satin surface finish that places it in the front rank of hardwood materials.

#### Woolen Mills and Village Property for Sale.

plant of the Rochdale Woolen Mills Rochdale, near Worcester, Mass., together with 41 parcels of renting and investment with 41 parcess of renting and investment real estate and village property, mill houses, etc., are offered at unrestricted auction sale on the premises, October 4 and 5, 1911, at 10.39 A. M. This property is divided into lots suitable for purchase. One lot consists of a new mill building, 371x86 feet, two eles, fireproof construction; a brick build-197x50 feet, 3½ stories and basement, and vater-power and steam-power plants, tric-light and fire-fighting equipr nents. Other consist of 812 lots or man. Of the parts consist of 812 lots of machinery arceis of real estate, about one-half a ew two, three and four-family houses, modern conveniences, slate roofs, hardwood finish, etc. The rest consists of village prop to the auctioneers, J. E. Conant & Co., Lowell, Mass.

#### Large Orders for Scales and Trucks.

The Standard Scale & Supply Co. of Pittsburg, Pa., recently made shipment of 10 carloads of scales and trucks for use at the carriods of scales and trucks for use at the new packing-house plant of Sulzberger & Sons Company, Oklahoma City, Okla. An-other large shipment was for 35 scales, mostly 120-ton rallroad-track scales, for the Bureau of Gas, Water and Electricity of Brooklyn, New York. In the equipment for Sulzberger & Sons Company were included a large number of special new pattern port-able suspension scales with steel-plate platforms which have recently been put on the market by "The Standard" company.
scale eliminates the necessity of cutting
floor where the scale is placed, and I
only necessary to use an incline of inches at each end to run on the platform. This type of scale is particularly desirable for use where the floors are damp and wet, as there is no opening to allow the water to run through to the floor below. It is stated that because of its advantages this scale is being adopted by various packing-houses and other users throughout the and other

#### TRADE LITERATURE.

#### Blanchard "Excess Stock Indicator."

The Blanchard Machine Co., Cambridge, Iass., has issued a pamphlet illustrating nd describing the newly-designed "Blanchard Continuous Reading Caliper" or Stock Indicator." The many advantages the Blanchard method are explained in the pamphlet, which will be sent on re the company.

#### J-M Roofing on Southern Buildings

Instances of the use of J-M asbestos roof ing on buildings in the South are noted in the J-M Roofing Salesman for September. Illustrations are shown in buildings of the Stonegap Colliery Co., Glamorgan, Va.; the Alderson Stephenson Bldg., Charleston, W Va., and other buildings in West Virginia va., and other buildings in West Virginia coal fields. A large West Virginia colliery building is shown with asbestos roofing and marked with the statement, quoting the Manufacturers Record, "In West Virginia the Spirit of Progress and Optimism is Abre

#### The McKiernan-Terry Pile Hammer

The increasing use of sheet piling in excarations and in the construction of deep oundations has brought about the develop nent of various improved driving appliment of The McKiernan-Terry Drill Co. ances. The McKiernan-Terry Drill Co., 115 Broadway, New York, describes its various sizes of pile hammers in a bulletin recently issued, together with illustrations of the hammer in actual service. The object of this hammer is to simplify the operation and to produce effective results at the least ex-pense. One of the hammers is shown driving a 3-inch by 10-foot wood sheeting, with only two men required to operate it. Another, with the same number of men, is shown driving steel sheeting in a trenching opera-tion, in which the work is done so rapidly that the use of a chain block ordinarily us with it was eliminated entirely. The 2½-in-hammer is shown driving steel sheeting lone man only. The hammer is fully d scribed and illustrated with line drawings showing all the details, and will be sent to interested persons on request.

#### Amsler Suction Gas Producers.

The Amsler lines of gas producers are nown and described in booklets of the

Amsler Gas Power Co., Wabash Bidg., Pitts burgh. It is stated that these producers as burgh. It is stated that these producers an the result of 15 years' experience with American ican fuels and gas producers in American industries, and that every detail has been developed and carried out to give the high The advanest capacity and efficiency. The tageous and special features are sh tageous and special features are shown in the booklets, and detail drawings of the construction are included. The booklet for type "C" producer treats of anthracite gas producers, 15 to 250 horse-power units; type 'D" treats of lignite gas producers, 50 to @ horse-power units, and type "E," bituminous gas producers, 100 to 2000 horse-power units. This company manufactures suction gas producers, pressure gas producers, gas appliances for power and for fuel for annealing. assaying, bronzing, carbonizing, coshing, drying and cake baking, enameling, forging, gaivanizing, glue manufacturing, bardening and tempering appliances, japanning, laun-dry work, lighting by incandescent mantles, rivet heating, soldering, welding, etc.

#### De Laval Steam Turbines.

One of the booklets recently issued by the De Lavai Steam Turbine Co. of Trenton N. J., illustrates and describes its steam turbines, centrifugal pumps and other trifugal machinery, and the other gives the results of comparative tests of large engine driven and turbine-driven centrifugal pumps. The several lines of machinery described in clude single-stage turbines for driving chinery of the various kinds and for and belt transmission; turbine-driven cen-trifugal pumps for water-works, general water service, boller feeding, hydraulic pressure, etc., also velocity-staged turbines with out gears: multi-stage impulse turbines out gears; multi-stage impulse turbines with gears and without gears; motor and belt driven centrifugal pumps; multi-stage cen-trifugal air compressors and De Laval speed-reduction gears for various services. The booklet on testing of pumps refers to tests made at the Torresdale filter plant, Philadelphia, where seven compound en driven centrifugal pumps of 45,000,000 ga per day capacity each are installed, and one turbine-driven centrifugal pump of 50,000,00 gallons capacity per day. This booklet de-scribes the tests and gives the efficiency and economy percentages found by the compara-tive tests. These booklets will be sent to interested persons on request.

# MOTOR TRUCK AND TRACTOR NEWS.

#### Mitchell Automobiles in Europe.

Extensive quarters have recently been ablished in London, 87 Great Portland by the Mitchell-Lewis Motor Co., Racine, Wis., under the management of Henry Plow, an experienced member of the Mitchell fac-tory organization. The Paris branch is at 20 Ruc de Tilsitt, Rene M. Petard, manager, with many sub-agents throughout Europe, where it is said the Mitchell car is a fa-miliar sight. Captain William Mitchell miliar sight. Captain William Mitchel Lewis, president of the company, stated of his recent return from Europe that "our for eign trade is developing very rapidly, and our frequent flying trips to Europe are made or the purpose of keeping in touch with changes and developments in motor-car struction."

#### Motor Trucks Replace Army Mule.

The time-honored army mule, always an important factor in the military operations of the past, seems destined to surrender to the motor truck. Reports and recommendations to this effect from commanding officers nons to this erect from commanding one-are frequently received at the War Depart-ment. A recent report from Col. Wm. L. Pitcher, commanding the Department of the Lakes, includes the following: "I believe the time is now at hand when experimental types of motor trucks should be issued for tests with a view of finding a type that will replace the field wagon to the greatest pos-sible extent."

#### Motor Truck Runs Machine Shop.

Motor truck as a power plant by Wyckoff, Church & Partridge, New York, to operate their service shop in a case of emergency recently took place when an or energency recently took place when an automobile repair order had to be filled without fail at 3 P. M. At 9 A. M. the machine shop notified the service department that the main driving motor of its machinery had broken down and that every effort filled had been exhausted to have the work other automobile shops in the neighborhood. At last a 60-horse-power truck stripped of its tire on the rear right and its rim used as a main pulley, from which a belt drove a portion of the shop machinery by truck power and accomplished the work.

# Mack and Saurer Truck Companies Combine.

Preliminary contracts have be erging the Saurer Motor Truck Church St., New York, and the Mack Bros.
Motor Car Co., Allentown, Pa. This cossolidation will enable the new company to
market a full line of motor trucks of from one to seven tons capacity, embodying the best mechanical ideas developed by the experience of both European and perience of both European and America manufacturers. It is expected that a con siderable saving in the expense of production will result without interfering with the methods of business of the two companies as now constituted. Each has been manufacturing and selling a motor truck different from those dealt in by the other.

#### Motor Trucks for Hauling Coal.

Coal dealers who are large users of trans portation vehicles have been quick to set the advantages of the motor truck. Many companies have already done away with the horse-drawn equipment, and others have done so in part. The New England Coal & Color Co. Portage have been been as a few of the color of the Coke Co. of Boston bought a five-ton Alee truck, manufactured by the American Loss motive Co., New York. It was thoroughly tried out and pushed to its utmost capacity during the winter. As a result of these servations and the good work of the mot bervations and the good work of the house truck two more five-ton Alco trucks have been ordered. Harry S. Houpt, manager of the commercial-car department of the Amer-ican Locomotive Co., states that over 60 per cent. of Alco trucks sold are repeat orders

#### Thirty-two Trucks in Three Days' Run.

Thirty-two motor trucks took part it three days' demonstration arranged week by the Chicago Motor Club. They week by the Chicago Motor Club. They effered each day about 55 miles in and about the city. The entries included two Mercuryathree Clarks, a Bulck, two Sampsons, two McIntyres, a Crown, Krickworth, Le Mook. Little Giant, Adams, Swanson, two Lauth Jurgens, a Decatur, Monitor, Chase, two Stegemans, Reliance, Mais, two Alcos, 68 Reliable, Dayton, Pope-Hartford and Saure. The run was intended primarily as a demonstration of the superiority of motor trads onstration of the superiority of motor trucks over horse-drawn trucks for city and subar

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ban delivery. To make the demonstration all the more convincing a truck drawn by a team of horses and loaded with two tons of sand was started one day and required to make in two days the run scheduled for the motor trucks on one day. dg., Pitts. ith American
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the "Little Glant" Commercial Car. The Chicago Pneumatic Tool Co., Chicago, has applied the facilities of its four exten-dre manufacturing plants, expert knowledge and experience in designing to the manufac-



"LITTLE GIANT" OPEN WAGON.

ture of the "Little Giant" commercial illustrated herewith. These cars are suitable for all classes of work within their rated capacity, built to embody simplicity, strength.



"LITTLE GIANT" EXPRESS

efficiency and reliability. The motor con-sists of two cylinders horizontally opposed, four-cycle, with five-inch bore and four-inch stroke. It is equipped with standard four-plunger force-feed oiler, and is designed for



"LITTLE GIANT" DELIVERY.

thermo-gravity circulation of cooling water. It is quiet-running and non-vibrating on ac-count of the opposed cylinders. The drive propeller shaft extends from motor to transmission in a straight line with motor crank

20 miles per hour, and the weight is from 2000 to 2500 pounds. The Eastern office of this company is 50 Church St., New York, with branch offices in other cities, including Birmingham, Baltimore, Norfolk, Cincinnati and St. Louis. Arthur R. Stevens, Schroeder St. and Edmondson Ave., is the Baltimore agent for these cars.

#### The Martin Single-Wheel Tractor.

An interesting device, the Martin tractor, was shown at the annual convention of the was shown at the annual convention of the International Association of Fire Engineers recently held in Milwaukee. This is a device consisting of a single-wheel motor and attachments to be fitted to the front axle of any piece of apparatus designed to be drawa by horses. It is manufactured by the Knox Automobile Co. of Springfield, Mass.

# Power Companies and Electric Vehicles.

In an address before the Electric Vehicle Association of America recently made by Stephen G. Thompson, the value of coperation between central electric-power stations and electric vehicles was urged. Mr. Thompson is connected with the Public Service Electric Co. of Newark, N. J., and his address gave interesting facts from his experience both in operating electric plants and with electric vehicles. He explained that co-operation is beneficial to both. Large lusiness houses, he said, have found electric vehicles a great improvement in transporting merchandise, and these electric vehicles have paid for themselves in two years. The electric vehicle, he said, is particularly efficient for heavy trucking in the cities. Mr. Day Baker of the General Vehicle Co., Long Island City, presented a statement of the subject from the motor vehicle standpoint. In an address before the Electric Vehicle

#### Electric Vehicle Show.

The second annual convention of the Electric Vehicle Association of America will be held in New York city on October 10, coincident with the annual electrical show, which will be held in the Grand Central Palace. The program will contain ten papers on the subject of the electric vehicle, storage batsubject of the electric vehicle, storage battery and other accessories of importance in the electric-vehicle field, which will be written and presented by the best authorities in this country on the subjects. Among the papers already arranged for is one on "Electric Vehicle Commercial Problems," by "Electric Vehicle Commercial Problems," by L. L. Lloyd and John Meyer of Philadelphia Electric Co.; one by E. S. Mansfield of the Boston Edison Co.; one by E. W. Curtis, Jr., of the General Vehicle Co., and one by J. G. Henninger of the National Electric Lamp Co. of Cleveland, O., on "The Proper Equipment and Lighting for an Electric Garage." Other papers on the performance of the storage battery are promised by the leading storage-battery manufacturers, as leading storage-battery manufacturers, as well as papers on the care and handling of garages, tires and other important factors in the electric-vehicle field.

## The Wilcox Motor Truck.

Feeling assured that the motor truck is destined soon to largely displace the horse and wagon for both city and country hauling, the H. E. Wilcox Motor Car Co., Minneapolis, is extending the agencies and selling forces of "Wilcox Trux." The accompanying



DEMONSTRATING "WILCOX TRUX."

shaft, fitted with universal joint, one end being a slip joint to prevent undue strain from coming on motor or transmission bearings when frame is exposed to twisting for demonstration purposes. It is stated strain or uneven roads. The wheel base is that an agency will be established shortly in Baltimore and another in Philadelphia. The trucks are now built in 1-ton, 1½-ton Cole

and 3-ton capacities. The specifications for and 3-ton capacities. The specimentions for the 3-ton truck provide a car of 5800 pounds, 15 miles per hour, 4-cylinder 4½x4½ inches, water-cooled, 30 horse-power, cone clutch faced with "Thermold," and double-chain drive, with wheel base of 126 inches. A numdrive, with wheel base of 126 inches. A number of these trucks are in daily use in Washington and other cities. In addition to these trucks the company manufactures a 15-passenger sight-seeing car, a 14-passenger hotel "bus," delivery wagons and automobiles.

# FINANCIAL NEWS

The MANUFACTURERS RECORD invites infor-mation about Southern financial matters, items of news about new institutions, divi-dends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

#### Review of the Baltimore Market.

Office MANUFACTURERS RECORD,

Baltimore, Md., September 27.
The dullness which has characterized the Baltimore stock market of late continued during the past week.

In the trading United Railways common sold from 17½ to 17½; do. incomes, 62½ to 61¾, with last sale at 62; do. funding 5s 85 to 84, with sale at 84½; do. notes, 99½ to 99; do. 4s, 85¼ to 86; Consolidated Gas, Electric Light & Power cemmon, 89¾ to 88¾, with last sale at 89; do. preferred, 96¾ to 96; do. 4½s, 86½ to 86; do. notes, 100; Consolidated Gas 5s, 108½; do. 4½s, 96; do. 4½s, 86½ to 86; do. notes, 100; Consolidated Gas 5s, 108½; do. 4½s, 96; do. 4½s, certificates, 1913, 98¾; Seaboard Air Line common, 22¾; Seaboard Company common, 24 to 25¼; do. second preferred, 53½; G.B.-S. Brewing 4s, 41 to 40.

Union Bank sold from 136¼ to 136½; Merchants' Bank, 184; Mercantile Trust, 146 to 145; Maryland Trust preferred, 118 to 117; American Bonding, 76; Baltimore Trust, 164½.

Other securities were traded in thus: Baltimore City 3½s, 1980, 87¼ to 87½; do. 1928, 94; do. do. 1930, 94; do. 4s, 1954, 101¾; City & Suburban (Washington) 5s, 104; Houston Oil common, certificates, 9½ to 8¾; do. preferred certificates, 72 to 73; Lexington Railway 5s, 95½; Maryland Life Insurance, 37; Maryland Electric 5s, 97¾ to 97½; United States Steel common, 63¼ to 52; City & Suburban (Baltimore) 5s, 105; Consolidation Coal, 100 to 99½; Roland Park Electric & Water 5s, 101; West Penn Traction 5s, 99¼ to 99½; Coal & Coke Railway 5s, 94½; to 104; Fairmont & Clarksburg Traction 5s, 99¼ to 99½; Coal & Coke Railway 5s, 94½; coal & Iron Railway 5s, 101¾; Atlantic Coast Line convertible dehenture 4s, 97½ to 87½; Chicago Railways 5s, 99¾, to 99½; Coal & Coke Railway 5s, 99¼, to 99%; Lake Roland Elevated 5s, 108¼; Suffend second preferred, 73; Georgia Southern Railway 5s, 101¾; Mercopolitan Street Railway 5s, 105½; Mercopolitan Street Railway (Washington) 5s, 106¾; Maryland & Pennsylvania incomes, 63 to 62; Milwaukee Refunding 4½s, 93; Georgia Southern & Florida 5s, 107½; Mercopolitan Street Railway (Washington) 5s,

## SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended September 27, 1911. Railrond Stocks. Par. Bid. Asked.

Railroad Stocks. Par.	Bid. A	wKed.
Atlantic Coast Line	117	
Atlantic Coast of Conn 100	220	230
Fairmont & Clarks. Trac. Pfd.100		87
Georgia Sou. & Fla. 2d Pfd106		85
Seaboard Co. Common100		
Seaboard Co. 1st Pfd100		87
Seaboard Co. 2d Pfd100		
United Rys. & Elec. Co 50		
Virginia Ry. & Power100	37	41
Bank Stocks.		
Bank of Baltimore100		170
Citizens' 10	40	411/4
Drovers & Mechanics'100	220	204
First National100		148
Maryland 20		26
Merchanics'	28	8.8.8
	1831/2	
Union100		
Western 20		41.
Trust, Fidelity and Casu-		
alty Stocks.		
American Bonding 25	751/2	
Colonial Trust 50	97	

Fidelity & Deposit 51	145	148
Fidelity & Deposit         53           Maryland         Trust         100           Maryland         Trust         10           Maryland         Trust         25           Union         Trust         50           U. S. Fidelity & Guaranty         100	92	94
Maryland Trust Pfd100	***	117
Maryland Casualty 25	***	94
Union Trust 50	444	68
Miscellaneous Stocks.	162	***
Ale Con Coal & Iron		43
Ala. Con. Coal & Iron	***	65
Baltimore Brick100 Baltimore Brick Pfd100	***	234
Baltimore Brick Pfd100	***	32
	***	41
Con. Cotton Duck Common. 53 Con. Cotton Duck Pfd. 50 Con. Gas, Elec. Lt. & P. Com. 100 Con. Gas, Elec. Lt. & P. Pfd. 100 Consolidation Coal. 100	2	18
Con. Gas. Elec. Lt & P. Com. 100	8814	8914
Con, Gas, Elec. Lt. & P. Pfd. 100	95	96
Consolidation Coal100	991/2	100
GDS. Drewing Co	1/2	3
Railroad Bonds.		
Atlantic Coast 1st 4s. Atlantic Coast Conv. Deben. 4s. Atlantic Coast (S. C.) 4s. Baltimore & Harris, 5s. Baltimore & Harris, Ext. 5s.	95 97%	95¼ 98
Atlantic Coast (S C) 4s	9514	15%
Baltimore & Harris, 5s	.100	21174
Baltimore & Harris, Ext. 5s	100	***
Carolina Central 4s	911/2	9.3
Coal & Coke Rallway 5s	1011/4	951/2
Col. & Green. 1st 6s	105%	102 1051/4
Georgia & Alabama 5s	10414	1051/2
Georgia & Alabama 5s Georgia, Car. & North. 1st 5s	104	10456
Georgia Southern & Fla. 1st as	1061/2	***
Maryland & Pennsylvania 4s	871/2	***
Petersburg Class A 5s	105%	* 5 4
Nary and & Fenns (Yanna 1887) Petersburg Class A 58. Seaboard 48, Stamped Senboard Adjustment 58. Seaboard & Roanoke 58. Seuthern Railway Con. 58. Virginia Midland 3d 68.	75	76
Seaboard & Roanoke 5s.	10514	140
Southern Railway Con. 5s	105%	
Virginia Midland 3d 6s	1051/2	***
virginia Midiand 5th 58	1051/2	
		000
Western Maryland 4s	86	87
Street Railway Bonds.		
Street Railway Bonds.	104%	87 101½
Street Railway Bonds.	86 104% 99%	101½ 100
Street Railway Bonds.	86 104% 99% 98%	101½ 100 96¾
Street Railway Bonds. Anacostia & Potomac 5s. Atlanta Con. St. Ry. 5s. Baltimore City Pass, 5s. Baltimore, Sp. Pt. & C. 4½s. Balto Typerfor, C. R. 5s.	86 104% 99%	101½ 100 96¾ 110
Street Railway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baltimore City Pass. 5s. Baltimore, Sp. Pt. & C. 4½s. Balto. Traction (N. B.) 5s.	86 104% 99% 961/2 108%	101½ 100 96¾ 110 96
Street Rallway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baltimore City Pass. 5s. Baltimore Sp. 47. & C. 42s. Balto. Traction (N. B.) 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.). City & Suburban 5s (Wash.).	86 104% 99% 98%	101½ 100 96¾ 110 96 105½ 104¾
Street Rallway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baltimore City Pass. 5s. Baltimore Sp. 47. & C. 42s. Balto. Traction (N. B.) 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.). City & Suburban 5s (Wash.).	86 104% 99% 96% 108%	101½ 100 96¾ 110 96 105½ 104½ 99¼
Street Railway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore Sp. 47. & C. 42s. Baitimore City Pass. 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.) City & Suburban 5s (Wash.) Fairmont & Clarksburg Trac. 5s. Lake Roband Elevated 5s.	86 104% 99% 96% 108% 105 104	1013/2 100 963/4 110 96 1053/2 1043/2 993/2 1083/6
Street Railway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore Sp. 47. & C. 42s. Baitimore City Pass. 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.) City & Suburban 5s (Wash.) Fairmont & Clarksburg Trac. 5s. Lake Roband Elevated 5s.	104% 99% 96% 108% 105 104 99 108	101½  96¾ 110 96 105½ 104½ 99½ 108½ 98½
Street Railway Bonds. Anacostia & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. C 142s. Baito. Traction (N. B.) 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.) City & Suburban 5s (Wash.) Fairmont & Clarksburg Trac. 5s. Lake Koland Elevated 5s. Macon Railway & Light 5s. Marcland Electric Railways 5s.	86 10434 9934 983 <u>6</u> 1083 <u>6</u> 105 104 99 108 9714	1013/2 100 963/4 110 96 1053/2 1043/2 993/2 1083/6
Street Railway Bonds. Anacostia & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. C 142s. Baito. Traction (N. B.) 5s. Charleston Con. Electric 5s. City & Suburban 5s (Balto.) City & Suburban 5s (Wash.) Fairmont & Clarksburg Trac. 5s. Lake Koland Elevated 5s. Macon Railway & Light 5s. Marcland Electric Railways 5s.	104% 99% 96% 108% 105 104 99 108	101½ 100 96¾ 110 96 105½ 104½ 99½ 108½ 98½
Street Railway Bonds. Anacostla & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. Carleston Con. Electric 5s. Carleston Con. Electric 5s. City & Suburban 5s (Balto.). City & Suburban 5s (Balto.). City & Suburban 5s (Balto.). Fairmont & Clarksburg Trac. 5s. Lake Roland Elevated 5s. Macon Railway & Light 5s. Maryland Electric Railways 5s. Maryland Electric Railways 5s. Newport News & Old Point 5s. Newport News & Old Point 5s. Norfolk & Portsmouth Trac. 5s.	86 104% 99% 96% 108% 105 104 99 108 971/2 981/2	101½ 100 96¾ 110 96 105½ 99½ 108½ 98½ 98 93
Street Railway Bonds. Anacostia & Potomac 5s. Atlanta Con. St. Ry. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. Baitimore City Pass. 5s. Clarleston Con. Electric 5s. City & Suburban 5s (Raito.) City & Suburban 5s (Raito.) City & Suburban 5s (Wash.) Fairmont & Clarksburg Trac. 5s. Lake Roland Elevated 5s. Macon Railway & Light 5s. Maryland Electric Railways 5s. Memphis Street Railway 5s. Newport News & Old Point 5s. Norfolk & Portsmouth Trac. 5s.	86 104% 99% 98% 108% 105 104 99 108 971/ 981/ 981/ 981/ 981/ 981/	101½ 100 96¾ 110 96 105½ 99½ 108½ 98½ 98  93 85½ 99%
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#### SOUTHERN COTTON-MILL STOCKS.

uotations Furnished by William S Glenn, Broker, Spartanburg, S. C., for Wook Ending Sentember 25

for Week Ending Septem	ber 25.
	Bid. Asked.
Abbeville Cotton Mills (S. C.)	75
Aiken Mfg. Co. (8. C.)	80
Anderson Cotton Mills (S. C.)	160
Anderson Cot. Mills (S. C.) Pfd.	100
Areadia Mills (S. C.)	92
Arkwright Cotton Mills (S. C.)	99 100
Augusta Factory (Ga.)	40
Avondale Mills (Ala.)	116
Belton Mills (S. C.)	120 130 98 103
Brogon Mills (S. C.)	90
Cannon Mfg. Co. (N. C.)	135
Cabarrus Cotton Mills (N. C.)	130 135
Cabarrus Cotton Mills (N. C.). Chadwick Mfg. Co. (N. C.) Pfd Chiquola Mfg. Co. (S. C.). Cilifton Mfg. Co. (S. C.) Pfd Cilinton Cotton Mills (S. C.). Columbus Mfg. Co. (Ga.) Courtenay Mfg. Co. (Gs. C.). Epillas Mfg. Co. (Aka.).	100
Chiquola Mfg. Co. (S. C.)	170
Clinton Mig. Co. (S. C.) Pid	97
Columbus Mfg Co. (Ga.)	93 98
Courtenay Mfg. Co. (S. C.)	100
Dallas Mfg. Co. (Ala.) Darlington Mfg. Co. (S. C.)	99
Darlington Mfg. Co. (S. C.)	80
D. E. Converse Co. (S. C.)	90
Drayton Mills (S. C.)	95 100
Eagle & Phenix Mills (Ga.) Easley Cotton Mills (S. C.)	117 162 175
Enoree Mfg. Co. (S. C.) Enoree Mfg. Co. (S. C.) Pfd. Enterprise Mfg. Co. (Ga.)	50 65
Enoree Mfg. Co. (S. C.) Pfd	96 100
Enterprise Mfg. Co. (Ga.)	65 75
Exposition Cotton Mills (Ga.)	200
Gaffaey Mfg. Co. (S. C.)	55 60
Gainesville Cotton Mills (Ga.) Glenwood Cotton Mills (S. C.)	72- 80 130 150
Glenwood Cotton Mills (S. C.) Gluck Mills (S. C.) Granby Cot. Mills (S. C.) Granby Cot. Mills (S. C.) 1st Pfd. Graniteville Mfg. Co. (S. C.) Greenwood Cotton Mills (S. C.) Greendel Mills (S. C.) Hartsville Cotton Mill (S. C.) Henrietta Mills (N. C.) Honnietta Mills (N. C.) King Mfg. Co. J. P. (Ga.) Lancaster Cotton Mills (S. C.) Lancaster (S. C.) Lancaster (S. C.) Constitution of the Consti	99
Granby Cot. Mills (S. C.) 1st Pfd.	35 45
Graniteville Mfg. Co. (S. C.)	140 145
Greenwood Cotton Mills (S. C.)	57 60
Grendel Mills (S. C.)	90 100
Henrietta Mills (N. C.)	160 175 160 175
Inman Mills (S. C.)	100 105
King Mfg. Co., J. P. (Ga.)	80 85
Lancaster Cotton Mills (S. C.)	130
Lancaster Cot. Mills (8. C.) Pfd.	97 100
Langly Mig. Co. (8, C.)	104 112 127 135
Limestone Mills (S. C.)	155 160
Lockhart Mills (S. C.)	65
Langly Mfg. Co. (S. C.) Fid. Langly Mfg. Co. (S. C.). Laurens Mills (S. C.). Limestone Mills (S. C.). Lockhart Mills (S. C.). Lockhart Mills (S. C.) Ffd. Loray Cotton Mills (S. C.) Pfd. Marlboro Cotton Mills (S. C.)	90 100
Loray Cotton Mills (N. C.) Pfd	95
Mariboro Cotton Mills (8. C.)	80
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Monaghan Mills (S. C.)	100
Monarch Cotton Mills (S. C.)	100
Newberry Cotton Mills (S. C.)	125 130
Ninety-Six Cotton Mills (S. C.)	130 150
Norris Cotton Mills (S. C.)	121 130
Mollohon Mrg. Co. (S. C.)	90 93
Orr Cotton Mills (S. C.)	90 93
Pacolet Mfg. Co. (S. C.) Pfd	95 100
Parker Common	40
Parker Pfd	75-
Parker Pfd. Pelzer Mfg. Co. (S. C.)	163 175 177
Poe Mfg. Co., F. W. (S. C.)	175 177 110 115
Saxon Mills (S. C.)	130

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Sibley Mfg. Co. (Ga.)	65	68
Spartan Mills (S. C.)	120	130
Trion Mfg. Co. (Ga.)		130
Tucapau Mills (S. C.)	310	350
Union-Buffalo (S. C.) 1st Pfd		75
Union-Buffalo (S. C.) 2d Pfd		16
Victor Mfg. Co. (S. C.)		115
Warren Mfg. Co. (S. C.)		95
Warren Mfg. Co. (S. C.) Pfd		105
Washington Mills (Va.)	28	
Washington Mills (Va.) Pfd	106	110
		110
Wiscassett Mills (N. C.)		135
	110	115
Woodside Cotton Mills (S. C.)	95	100
Watts Mills (S. C.)	80	90
	120	125

#### FINANCIAL CORPORATIONS.

Ala., Robertdale.—The Robertdale State Bank, capital \$10,000, is reported incorporated by Frank S. Stone, W. S. Harvey, William McIntosh and others.

Ark., Eudora.—Reported chartered: The Merchants & Planters' Bank of Eudora; capital \$50,000. W. H. Stephenson is president; M. Schwartz, vice-president; A. A. Fischel, secretary; R. L. Ross, treasurer.

Ark., Hot Springs.—Reported chartered: The Weslow Co-operative Trust Co.; capital \$50,000. M. Arnold Weslow, president; John R. Young, vice-president; Mary Weslow, secretary.

Ark., Marked Tree.—The Merchants and Farmers Bank, capital \$50,000, is reported organized by V. C. Pettie of the Bank of Jonesboro, Ark.

Ark., Pangburn.—The Pangburn State Bank, capital \$20,000, is reported chartered. Incorporators, Harry Churchill, president; J. D. Castleberry, vice-president; W. D. Ellis, secretary and treasurer; A. H. Henderson and C. F. Long.

derson and C. F. Long.

Ark., Pea Ridge.—Official: The Bank of
Pea Ridge chartered; capital \$10,000; incorporators, J. M. Putman, Frank Webb, W. T.
Patterson, F. M. Warren, J. C. Miller, all of
Pea Ridge: G. C. Laughlin, Washburn, Mo.;
Geo. Van Zandt, Garfield, Ark. Business
began September 15.

Fla., Jacksonville.—Official: The Heard National Bank of Jacksonville has applied for charter: capital \$1,000,000; surplus \$200, 000. J. J. Heard, president; W. B. Sadler and J. G. Boyd, vice-presidents, and C. W. Hendley, cashier. Business is to begin about November 1.

Ga., Atlanta.—The Inter-Southern Insurance Co., it is reported, has been chartered. Incorporators, R. C. McWhorter of Menlo, L. F. Finleyson of Finleyson, S. C. Tarver of Chickamauga and John B, Floyd and E. L. Hamill of Birmingham, Ala.

Ga., Alston. — Reported chartered: The Citizens' Bank of Alston; capital \$25,000. Incorporators, J. H. Dees, D. S. Williamson and K. M. Johnson of Alston.

Ga., Atlanta.—The Commonwealth Properties Corporation, a real estate, stock and bond concern, is reported chartered with \$51,000 capital, with privilege of increasing to \$200,000; incorporators, C. N. Danlels, H. B. Kennedy, Westervelt Terhune and W. B. Stovall.

Ga., Bainbridge.—The Citizens' Bank of Bainbridge, capital \$30,000, is reported organized with L. Ball of Bainbridge, president; W. G. Powell of Cyrenne and H. M. Graham of Brinson, vice-presidents.

Ga., Clarkesville.—The Farmers and Traders' Bank, capital \$25,000, is reported organized with directors thus: John Martin, president; J. A. Robertson, vice-president; W. D. Grant, J. N. Gables, Prof. W. H. Maxwell and Dr. H. L. Earl. Business is expected to begin about November 1.

Ga., Crawford.—The Farmers' Bank of Crawford is reported to have begun business; L. O. Benton, president and financial agent; W. D. Smith and Dr. E. O. Veal, vice-presidents, and H. T. O'Neal of Dublin, Ga., cashier.

Ga., Dahlonega.—A new bank is reported being organized by F. G. Jones and others.

Ga., Dalton.—A new bank is reported being organized.

Ga., Fairburn.—The Fairburn National Bank is reported to have made application for a charter; capital \$25,000; directors, W. A. McCurry, R. O. McLarin, C. B. Dorris, C. A. Johnson, W. E. Sharp and C. C. Smith, Fairburn, Ga.

Ga., Lovett.—The Farmers' State Bank is reported being organized with \$25,000 capital. Business is expected to begin October 1; C. R. Williams, president; E. J. Sumner and B. T. Kight, vice-presidents, and R. L. Sumner,

Ga., St. Marys.—Reported chartered: The Bank of Camden; capital \$25,000; incorporators, S. C. Townsend, L. Johnson, J. R. Bachlott and others.

Ky., Louisville.—The Kentucky Live-Stock Insurance Co. is reported to have filed articles of incorporation; capital \$50,000; B. B. Bales, G. D. Crain, J. T. Beard, H. K. Cole, J. Frank White and E. P. Cox.

Ky., Marion.—The First National Bank of Marion is reported to have made application for a charter; capital \$25,000; J. G. Rochester, Marion; Urie W. Jenkins, J. R. Gray, J. W. Lamb and W. H. Crawford, directors.

Md., Baltimore.—Official: The Bell Real Estate and Loan Association, capital \$5000, Incorporated by George F. Kratzer, James E. Godwin and Howard E. Cruse. Business is to begin October 1.

Md., Baltimore.—The C. Ford Seeley Company, capital \$100,000, is reported incorporated to deal in stocks and bonds; incorporators, C. Ford Seeley, Peter W. Whitney and Edward W. Hughlett.

Miss., Booneville.—The Mississippi Mutual F're Insurance Co., with office at Booneville, is reported to have filed its charter. Incorporators: W. L. Newhouse, W. M. Barnett, J. R. Ketchum, B. F. Eastman and J. L. Muse.

N. C., Charlotte.—Official: The Hardware Mutual Fire Insurance Co. of the Carolinas, with heaquarters in Charlotte, is organized with officers thus: President, W. W. Watt of Charlotte; vice-president, W. H. Keith, Timmonsville; treasurer, E. W. Duvall, Cheraw; secretary, T. W. Dixon, Charlotte; executive committee, W. W. Watt, W. H. Smith, U. B. Blalock, R. H. McDuffle and T. W. Dixon. E. R. Preston, Charleston, N. C., is chief counsel. Business is to begin January, 1912. The company has cash assets (amount available to pay losses \$3000).

N. C., Conover.—Official: The Citizens' Bank incorporated; capital \$100,000. Business is to begin January 2, 1912. Marvin Minor and others Interested.

N. C., Shallotte.—The Merchants and Farmers' Bank, recently reported chartered, has, according to press dispatches, elected directors thus: J. W. Brooks of Wilmington, president; G. W. Kirby of Supply, vice-president; J. W. Yates, T. E. Cooper, R. R. Stone of Wilmington and J. E. Robinson of Supply; J. H. White and D. G. Hewett of Shallotte, George E. Brooks of Seaside, F. K. Mintz of Mill Branch and W. R. Colman of Ashe.

N. C., Townville.—The Bank of Townville, capital \$10,000, is reported organized with directors thus: J. J. White, president; J. J. White, G. W. Morrow, J. H. Taylor, S. R. Adams, J. E. Kimball, C. W. Hargrove and A. R. Torry.

Okla., Hitchita.—The Hitchita State Bauk is reported chartered; capital 110,000; incorporators, T. J. Collins, Ezra Barnard, Jr., W. C. Jackson and William H. Davis, all of

Okla., Oklahoma City.—The Wilkin-Hale Bank of Oklahoma City, capital \$50,000, is reported incorporated by J. M. Hale, J. L. and R. H. Wilkin, Whit M. Grant, Weston Atwood, B. F. Zeigler and F. M. Riley, all of Oklahoma City. This succeeds the Night and Day Bank.

8. C., Camden.—The Loan and Savings Bank of Camden is reported chartered; capital \$30,000; L. L. Clyburn, president; W. R. Eve, Jr., vice-president; John S. Lindsay, secretary-treasurer and cashier.

S. C., Chester.—The Home Builders' Loan Association is reported chartered; capital \$100,000; John Frazer, president; J. T. Perkins, vice-president; G. J. Patterson, secretary and treasurer.

S. C., Bluffton.—The Bank of Bluffton is reported to have been granted a commission; capital \$15,000; petitioners, W. J. Fripp, C. E. Ulmer, J. S. Graves, J. B. Walker and A. Fripp.

- S. C., Charleston.—The Charleston Buildlng and Loan Association of Charleston is reported to have been granted a license; capital \$3000; R. B. Glichrist of Charleston is secretary and treasurer.

S. C., Gaffney.—Official: The Cherokea Savings Bank is chartered with \$25,000 capital. Business is expected to begin about October 15; organizers, P. C. Poole, A. H. Miller and D. Green, all of Greer, S. C. Press reports say that Mr. Poole will be president and J. E. Brockman cashier.

S. C., Meggett.—The People's Bank is reported to have been granted a commission; capital \$15,000; petitioners, W. F. Carr, Frank E. Fowles, W. B. Searson and John W. Geraty.

S. C., Marion.—The Marion National Bank is reported chartered; capital \$100,000. S. W. Norwood, president, and J. L. Williams, cashier.

S. C., Norway.—Reported chartered: The Farmers and Merchants' Bank; capital \$20,-600; H. P. Fulmer, president; J. W. Barnes, vice-president; A. T. Garrick, cashier. S. C., Norway.—Official: The Farmers & Merchants' Bank of Norway chartered; capital \$20,000. H. P. Fulmer, president; J. W. Barnes, vice-president, and A. T. Garrick, cashier. Business began September 18.

S. C. Ridgeville.—The Bank of Ridgeville is reported chartered; capital \$25,000. W. B. Browing, president; J. E. Thrower, vicepresident, and W. J. Dukes, cashier.

Tex., Fort Davis.—Reported chartered: The Fort Davis State Bank of Fort Davis; capital \$25,000. Incorporators: J. W. Espy, Charles Mulhern and T. H. Brown, Jr.

Tex., Fort Worth.—The Bankers & Citizens' Co-operative Life Insurance Co. is reported chartered. Incorporators: J. L. Johnson, W. E. Brown and M. H. Carter.

Tex., Mercedes.—The Planters' State Guarantee Bank of Mercedes, capital \$15,000, has elected officers thus: Thomas L. Jones, president: William Lingenbrink, vice-president, and E. P. Gregg, cashier.

Tex., San Antonio. — The Southwestern Mortgage Loan Co. of San Antonio, capital \$1,000,000, is reported incorporated by C. O. Justin, T. J. Kearfut and R. S. Kampmann.

Tex., Trinity.—The Trinity National Bank is reported organized; capital \$30,000; F. L. Barnes, president; J. B. Priton, vice-president, and P. H. Cauthan, cashier.

Tex., Weldon.—Official: The First Guaranty Bank of Weldon charatered; capital \$10,000. W. A. Moore, president; W. D. James, vice-president; G. M. Britain, cashier; J. P. Westmoreland and J. R. Phillips, directors. Business began September 20.

Va., Carson.—Official: The Bank of Carson, capital \$25,000, chartered; P. B. Halligan, president, Carson; R. B. Hartley, vice-president, Stony Creek, Va.; N. P. Peebles, secretary, Carson; Judge T. Rines, counsel, R. F. D. No. 2, Petersburg. Business is expected to begin about October 15.

Va., Clifton Forge,—W. F. Tinsley & Co., Inc., is reported chartered to conduct an insurance business; W. F. Tinsley, president; F. W. King, vice-president, and S. E. Stratton, secretary. Offices will be in the Carpenter & Boxley Bidg.

Va., Fredericksburg, — The Commercial State Bank of Fredericksburg, capital \$6,000, surplus \$10,000, will, it is reported, begin business about November 1; S. W. Somerville, president; B. J. Marshall and G. B. Wallace, vice-presidents, and G. W. Shepherd, cashier.

Va., Richmond.—Official: The Equitable Loan Society incorporated; capital \$30,000. Directors: T. B. Saunders, president; C. Manning, Jr., vice-president; C. Ridgeway Moore, secretary, and J. W. Jeffries, treasurer. Business is expected to begin in about 60 days.

Va., Richmond. — The Central National Bank, 307 E. Broad St., is reported to have begun business; capital \$250,000; Charles Hutzler, president; Charles A. Peple, first vice-president; W. H. Schwarzschild, second vice-president; Philip E. W. Goodwin, cashier.

W. Va., Jane Lew.—Official: The People's Bank chartered; capital \$35,000; directors, S. G. Hall, president; G. W. Neely, first vice-president; F. E. Shetter, second vice-president; G. B. Waggoner, cashier; M. L. Law, D. L. Bryan, T. F. Law, R. R. Price and Geo. Norris. Business is to begin about September 25.

### NEW SECURITIES.

Ala., Huntsville.—Reported that it is proposed to issue \$130,000 of bonds to pay city's indebtedness.

Ala., Birmingham.—The First National and the American Trust Co. purchased at \$21,010 premium, according to press dispatches, the \$1,000,000 of 5 per cent. 30-year funding bonds.

Ala., Montgomery. — Reported defeated: 325,000 of improvement bonds.

Ala., Piedmont.—Official: October 18, it is reported, an election is to be held to vote on \$35,000 of water-works and electric-light plant bonds. P. W. Roberts is Mayor.

Ark., Pine Bluff.—Official: Bids will be received until noon October 16 by the Commissioners of Drainage District No. 3, Jefferson county, W. C. Hudson, secretary, P. O. Box 676, for \$35,000 of 6 per cent. 10-25-year bonds.

Fla., Pensacola.—A combination of bend buyers is reported to have purchased \$190,000 of 4½ per cent. Escambia county jail bords.

Fla., Brooksville.—Official: Bids will be received by the Town Council until noon September 39 for \$16,500 of 5 per cent. bonds; denomination \$100. The bonds are for street and sidewalk paving, fire station, bridges.

retiring old bonds and pay for fire engine, Address F. L. Stringer and S. A. Wilson.

Fla., Gainesville. — October 10, it is peported, an election is to be held to vote on \$35,000 of street-paving and \$40,000 of waterworks bonds.

Fla., Jennings.—Official: Bids will be received until 2 P. M. November 1 for \$12,500 of 6 per cent. 30-year city bonds. Bonds were voted June 29 and have been validated by the Superfor Court. Address J. C. Barnes, Town Clerk.

Fla., St. Cloud.—An official letter says that an election is to be held October 2 to authorize the Board of Aldermen to borrow \$8900 on promissory note, bearing 8 per cent. interest, payable as follows: \$2000 in 1912, \$2000 in 1915, \$2000 in 1917 and \$2000 in 1915. It is understood that a local bank will handle the notes at par. H. D. Coloin is Mayor.

Fla., St. Cloud.—Reported that an election is to be held to vote on \$8000 of improvement bonds.

Ga., Americus.—Official: Hambleton & Co., Baltimore, have purchased \$40,000 of 4 per cent, paving, \$40,000 of sewer and \$25,000 of water 4½ per cent. 30-year bonds at \$101, 966.70; denomination \$1000; dated July 1, 1911.

Ga., Cochran.—October 23, It is reported, an election is to be held to vote on \$20,000 of school bonds.

Ga., Statesboro.—J. A. McDonald, Mayor, writes: "Will not vote on bonds for sewerage until after the meeting of Legislature next July, when the charter of the city will be amended, as we haven't the authority under charter to issue bonds for sewerage at this time." This denies the report that an election is to be held October II to vote on \$60,000 of sewerage bonds.

Ga., Unadilla.—The Hillyer Trust Co. is reported to have purchased at \$831 premium 28,000 of 6 per cent. sewer and water-works londs. S. L. Speight is City Clerk.

Ky., Lexington.—November 7, it is reported, an election is to be held in Fayette county to vote on \$70,000 of funding bonds.

Ky., Lexington.—November 7, it is reported, an election is to be held in Fayette county to vote on \$70,000 of 4 per cent. 20-year funding bonds.

La., Jena.—J. W. Carter, superintendent Board of Education, will receive bids unfil 10 A. M. October 14 for \$30,000 of 5 per cent. 15-year building bonds; dated January 1, 1912; denomination \$1000.

La., Lafayette.—Official: Bids will be received until October 5 by A. R. Trahan, M.D., Mayor, and the Council for \$60,000 of 5 per cent. water, light and market bonds; denominations \$500 and \$1000; maturity 1931.

La., Leesville.—S. A. Kean & Co. of Chicago are reported to have been awarded \$40,000 of 5 per cent. 20-30-year Vernon parish school district bonds.

I.a., Vidalia.—Press dispatches state that \$20,000 of 5 per cent, school bonds for Vidalia and School District No. 5 have been sold.

Mo., Canton.—Officiai: F. C. Millspaugh, Mayor, will receive bids until September 25 for \$10,000 of 5 per cent. 5-10-year waterworks bonds; denomination \$500; dated August 15, 1911.

Md., Cumberland.—According to press dispatches, an ordinance has been prepared providing for the issuing of \$500,000 of 4½ per cent. water bonds; denomination, 469 of \$1000 and 9 of \$100 each. Roderic Clary is chairman finance committee.

Mo., Cole Camp.—H. T. Holtz & Co., Cblcago, are reported to have purchased \$10,000 of 6 per cent. water-works bonds. Dated July 1, 1911; maturity, \$5000, July 1, 1921, and 1926.

Mo., Columbia.—Reported that all bids received September 22 for the \$100,000 of Columbia special road district (Boone county) bonds were rejected and new bids are to be asked. Address J. A. Hudson, chairman of the district.

Mo., Hannibal.—Reported defeated: \$350,000 of water-works bonds.

Mo., Hollister.—An election is soon to be held, it is reported, to vote on \$15,000 of road-improvement bonds.

Mo., Jefferson City.—Bids will be received until December 1, according to press dispatches, for \$3,500,000 of bonds for construction of new capital; denomination \$1000; John P. Gordon is State Auditor.

Mo., Maryville.—Official: Voted: \$100,000 of 4½ per cent. water-works bonds. A. S. Robey is Mayor. S. G. Gillam is secretary Board of Public Works.

[For Additional Financial News, See Pages 74 and 75.]

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OF BALTIMORE

A. H. S. POST, President

Mo., Paris.-Reported voted: \$100,000 of

Mo., Pacific.-Voted September 12: \$15,000 of water-works bonds.

Mo., Boonville.—Reported voted: \$10,000 of water bonds.

Mo., Unionville.-H. C. Speer & Sons Company, Chicago, according to press dispatches, have been awarded the \$8000 of 5 per cent. 2-5-year Putnam county hospital bonds at par

Mo., Webster Groves.—Reported defeated: \$75,000 of water-works bonds.

N. C., Charlotte.-Official: Voted July 4: X. C., Charlotte.—Ometh: Voted July 4: \$350,000 of water-works, \$100,000 of school, \$150,000 of street, \$150,000 of sewer and \$65,000 of auditorium 4½ per cent. 30-year bonds; denomination \$1000. On August 14 the American Trust Co., Charlotte, N. C., purchased the water bonds at \$1950 premium with accrued interest, and the school bonds at \$300 premium with accrued interest. Address Finance Committee.

N. C., Dover.-Mosely Drainage District, is reported, proposes to issue \$42,000 of 6 It is reported, propos per cent. bonds.

N. C., Spring Hill.—Reported that all bids received September 15 for the \$20,000 of 6 per cent. road bonds were rejected.

N. C., Weldon.-Reported voted: \$40,000 of water-works bonds.

S. C., Johnston.-Official: October 10 an election is to be held to vote on \$20,000 of water-works bonds. J. D. Bartley is Mayor.

Okla., Anadarko.-Reported voted: \$63,000 of floating-indebtedness bonds.

Okla., Clinton.-Reported voted: \$30,000 of deep-well, \$25,000 of city hall and \$10,000 of park-improvement bonds

Okla., Clinton.-Reported voted: \$20,000 of deep-well, \$25,000 of city hall and \$10,000 of park-improvement bonds.

Okla., Collinsville.-Official: Voted: \$45,000 of electric-light bonds, which have been pur-chased at par by C. A. Rees. Wm. M. Gresham is clerk.

Okla., Okmulgee.-Reported that an election is to be held in Okmulgee county to rote on road bonds

Okla., Oklahoma City.—Oklahoma county, it is reported, proposes to vote on good-roads

Okla., Perry.—September 26, it is reported, an election is to be held in Noble county to vote on \$75,000 of courthouse bonds.

Okla., Soper.—Official: Voted August 22: 13,000 of 6 per cent. 25-year water-works \$13,000 of 6 per cent. 25-year water-works bonds; denomination \$500; dated September 1.

Okla., Tishomingo.-Reported that a petition has been filed with the County Commis-sioners asking that an election be held in Johnston county in October to vote on \$290,-000 of turnpike bonds.

Okla., Tulsa.-Official: Voted: \$500,000 of b per cent. 25-year good-roads bonds of road district No. 1, Tulsa county. R. E. Curran is County Clerk and N. L. Saunders chair-man Board of County Commissioners.

Okla., Tulsa.-Official: The Exchange National Bank of Tulsa purchased on September 19 at par and \$15 the \$190,000 of 5 per cent. 20-year general-improvement bonds. C. B. Cline is City Auditor.

Okla., Walters.-Official: R. J. Edwards has purchased at par \$6500 of 6 per cent. 20-year water-works extension bonds voted Au-gust 28; dated October 1, 1911; maturity October 1, 1931,

8. C., McCormick.-Reported that bids will S. C., McCormick.—Reported that bids win be received until noon October 24 by F. C. Robinson, secretary School Trustees, for \$10,000 of 6 per cent. bonds of McCormick school district No. 13.

S. C., Morgantown.-Reported that all bids received September 18 for \$35,000 of 5 per cent. 20-year water bonds were rejected. Hamilton Erwin is Town Clerk.

S. C., Sumter.—An official letter says that ote on bond issue in Sumter county was a tie, and has been decided against issue. J. R. Sumter is clerk County Commissioners.

Tenn., Crossville.—Official: H. T. Holtz & Co., Chicago, Ill., has purchased \$40,000 of 5 per cent. two-year Cumberland county pike bonds. It is expected to offer in a short time another issue of \$60,000 for pike roads.

Tenn., Covington.-Reported that on September 30 an election is to be held in Tipto county to vote on \$300,000 of road bonds.

Tenn., Elizabethton,-Official: Authorized: \$60,000 of 5 per cent. 15-30-year Carter county road bonds. J. M. Edens is clerk.

Tenn., Livingston.—An official letter confirms report that the \$150,000 of Overton county road bonds were defeated. R. L. Mitchell, Jr., is clerk.

Tenn., Maryville. — Official: feated. A. K. Harper is Mayor.

Tenn., Memphis.—Bids will be received un-til October 9 for \$21,000 of 6 per cent. bonds of St. Francis Levee District of Arkansas. Address O. N. Killough, president board of directors of the St. Francis Levee District of Arkansas, 362 Randolph Bldg., Memphis,

Tenn., Oblon.-Official: Bids will be received by the Mayor and Aldermen until 2 P. M. October 18 for \$35,000 of 6 per cent. water, light and school bonds. S. J. Harris

Tenn., St. Elmo.-Reported voted: \$100,000 of sewer bonds.

Tenn., Somerville.-Reported voted: Bonds for sewer system.

Tex., Abilene.—Sutherlin & Co. of Kansas City are reported to have been awarded at par and accrued interest \$20,000 of water bonds. B. K. Isaacs of Abilene is City Attorney.

Tex., Austin.-The State Board of Education has purchased at par \$53,000 of 5 per cent, school bonds of various counties for the benefit of the permanent school fund.

Austin.-The Attorney-General ha approved securities as follows: \$344,000 of 5 per cent, 20-40-year El Paso funding and 5 per cent. 20-40-year El Paso funding and school bonds; \$12,000 of 6 per cent. 5-40-year Archer City water-works bonds; \$1500 of 5 per cent. 10-40-year Plano water-works bonds; \$1000 of 5 per cent. 5-20-year Eastland county common school district bonds; \$1000 of 5 per cent. 1-20-year Houston county common scho cent. 1-20-year Houston county common school district bonds; \$8000 of 5 per cent. 10-20-year Denton county common school district bonds; \$45,000 of Waco sanitary sewer, \$35,000 storm sewer, \$50,000 of street, \$70,000 of school 5 per cent. 30-year bonds; \$500,000 of 4½ per cent. 20-30-year Houston schoolhouse bonds; \$1000 of 5 per cent. 5-20-year Robertson county common school district bonds; \$1990 of 5 per cent. 10-40-year Bell county building repair bonds; \$26,000 of 5 per cent. bonds of Galveston county drainage district No. 1; \$31,000 of 5 per cent. 10-40-year Corpus Christi sanitary-sewer bonds; \$12,500 of Electra in-dependent school 5 per cent, 15-40-year bonds.

Tex., Bay City.—Official: An election is to be held in about 30 days to vote on \$20,000 of 5 per cent. 40-year sewer bonds; denomination \$1000.

Tex., Belleville.-Official: Bids will be received until October 7 by C. G. Krueger, County Judge, for \$175,000 of 5 per cent. 540-year public highways improvement bonds of road districts Nos. 1, 2 and 3 of Austin county; denomination \$1000; dated June 15,

Tex., Corpus Christi.-October 21, it is re ported, an election is to be held in Nueses county to vote on \$55,000 of courthouse and iall bonds.

Tex., Dallas.—The question of holding an election in April, 1912, to vote on \$500,000 of city hall bonds is reported under considera-

election is to be held to vote on \$10,000 of 5 per cent. 40-year bonds of DeSoto School District No. 39, Pallas county.

Tex., Fairfield.—C. B. Grayson, clerk Free-stone county, writes: "No bond matter pending now."

Tex., Franklin,-Official: An election is to be held in Robertson county to vote on \$150,000 of bonds of Commissioners' precinct No. 3.

Tex., German.—Official: On August 15 the Voodmen of the World, Omaha, Neb., purhased \$20,000 of 5 per cent. 20-40-year school

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### SUFFERN & SON CERTIFIED PUBLIC ACCOUNTANTS **NEW YORK**

ANNOUNCE THAT THEY HAVE OPENED A BRANCH OFFICE IN BIRMINGHAM, ALA FIRST NATIONAL BANK BUILDING



# **FINANCIAL STRENGTH**

is what you demand of your depository, and is what we offer. We started 1869. We guarantee absolute safety for your principal, and will pay 4% in our Savings Department and 4% on Certificates of Deposit, both payable quarterly. Let us send printed matter.

# The Savannah Bank & Trust Company

SAVANNAH, GEORGIA

Capital and Surplus - - \$1,200,000

OFFICERS

WM. F. McCauley, Pres. Cashier—M. D. Papy. Chas. G. Bell, Vice-Pres. Asst. Cash.—E. M. Nichols

Savannah enjoys enviable prestige as a distributing po-for goods of Eastern and foreign manufacture. Nothing c-alter Savannah's natural advantage as regards to location

WHAT TIME IS IT?

#### $\mathsf{THE}$ ELECTRO-CLOCK



gives an absolute accurate answer any time, day or night. It never varies. Cost of winding only 50 cents per year. Doesn't get out of order-you can always rely on it.

Let us send catalogue.

THE ELECTRO-CLOCK CO.

116 Mercer Street.

BALTIMORE, MD.

bullding bonds; denomination \$1000. D. G. is secretary School Board.

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Tex., Graham.—Official: A. B. Wood of Dallas, Tex., dealer in bonds and stocks, purchased \$20,000 of Young county 5 per cent ridge bonds.

Tex., Granger.—Bids will be received until § P. M. October 17 for \$15,000 of 5 per cent. 3-40-year street-paving bonds; denomination g000; dated June 1, 1911. G. H. Kincald is city Secretary.

Tex., Hillsboro.—Official: Bids will be received until 8 P. M. October 17 for \$30,000 of 45 per cent. 15-40-year water and sewer extension bonds and for paying off floating debts; denomination \$1000. Address J. D.

Tex., Nacogdoches.—Bids will be received until 10 A. M. October 9 by E. P. Marshall, ladge of Nacogdoches county, for \$75,000 of 5 per cent. 5-40-year courthouse and jail

Tex., Orange.—An election is soon to be held, it is reported, to vote on \$50,000 of water-works and \$5000 of fire-department

Tex., Port Arthur.-Reported that Ulin & co, of Chicago have been awarded the \$25,000 of 5 per cent. 20-40-year independent school district building bonds.

Tex., Vernon.-Official: The Superintendent of County Schools, located at Vernon, has for sale \$7000 of school bonds.

Va., Richmond.—Official: Bids will be re-ceived until noon October 17 by E. J. War-ren, auditor, for \$1,400,000 of 4 per cent. 34-year public Improvement bonds; registered or coupon convertible; dated July 1, 1911; maturity July 1, 1945. Address George 8. Crenshaw. clerk, Commissioners of Finance.

W. Va., Grafton.—Official: Voted: 490,000 of water-system bonds. A. F. McWilliams is Mayor and W. C. Hanway Clerk.

W. Va., Harrisville. — Reported voted: 415,000 of bonds to invest in street-railway

W. Va., Hinton.—Reported voted: \$50,000 f Summers county road and bridge bonds.

W. Va., Powhatan.—The question of iszu-ing improvement bonds is reported under

W. Va., Union.—The question of holding an election to vote on \$37,500 of road-im-provement bonds is reported under consid-

At Pine Bluff, Ark., bids will be received until noon October 16 for \$35,000 of 6 per cent. 10-25-year bonds of drainage district No. 3, Jefferson county. Further particulars will be found in the advertising columns.

At Lewisburg, W. Va., the Snew Flake Lime & Rock Co. of Fort Spring, W. Va., is offering for sale 6 per cent. 10-20-year bonds. Further particulars will be found in the adrertising columns.

At Hillsboro, Tex., bids will be received until 8 P. M. October 17 for \$30,000 of 4½ per cent. 15-30-year sewer and water extension and floating indebtedness bonds. Further particulars will be found in the advertising columns.

At Jennings, Fla., bids will be received until 2 P. M. November 1 for \$12,500 of 6 per cent, 30-year bonds. Further particulars will be found in the advertising columns.

At Obion, Tenn., bids will be received until 2 P. M. October 18 for \$25,000 of 6 per cent. water, light and school bonds. Further particulars will be found in the advertising columns.

#### FINANCIAL NOTES.

The Lee County State Bank of Lexington, Tex., according to press dispatches, has in-creased its capital from \$10,000 to \$25,000.

creased its capital from \$10,000 to \$25,000. A condensed statement of the 205 State banking institutions in Louisiana September 1, 1911, shows total resources, \$116,286,693; loans and discounts, \$70,354,158; due from banks and bankers, \$14,624,696; capital stock pald in, \$13,873,690; surplus, \$7,018,436; undivided profits, less expenses and taxes pald, \$2,139,632; due to other banks and bankers, \$9,522,336; individual saving deposits, \$25,501,115; individual deposits subject to check, \$45,542,820; time and demand certificates of \$45,542,830; time and demand certificates of

The Graham Securities Co. of Birmingham. Ala., according to press dispatches, has in-creased its capital from \$2000 to \$100,000.

The Jefferson Savings and Building Association of Louisville, Ky., is reported to have increased its capital from \$500,000 to \$1,000,000.

# Everything in Sight!

Study this illustration carefully. Note how a single glance of the operator takes in printed items, the total and the check being listed. This shows why the WALES is the most completely visible of all adding and listing machines. And "visibility" in the WALES means increased speed, increased accuracy, and increased comfort for the operator—no need to bend forward or backward to keep track of what you are doing. Ask us to tell you why 97 out of every 100 WALES are sold after competitive tests with other adding machines.

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not only wins in the test of actual work, but it wins in he test of durability. This is shown by the fact that it is the only adding machine with a five-year guarantee.

**GUARANTEED FIVE YEARS** 

This in itself is proof of highest quality. It shows our implicit confidence in WALES quality. Tell us the nature of your business and we will send a WALES for free trial. No expense or obligation on your part. Simply write, mentioning this weekly.

The Adder Machine Co. WILKES-BARRE, PA.



# Santo Domingo Planters Company Formed

to cultivate on the Island of Santo Domingo

# SEA ISLAND OR LONG STAPLE COTTON

which always commands a very great premium over average staple cotton of American growth, and has never been in adequate supply.

The subscribers to \$100,000 preferred 8% cumulative stock (\$10 per share par) will receive a bonus of \$100,000 common stock (\$10 per share par) and will control the company in every way for four years.

We have consented to act as Bankers for this Company. First, because of our long experience in the Cotton Markets-since 1869; Second, because of the great merits of this proposition; Third, because entire control of management is conceded to Subscribers.

Prospectus and all information in detail on application to

## ATWOOD VIOLETT & CO., 20 Broad St., New York

Members N. Y. Stock Exchange

Members N. Y. Cotton Exchange.

Members N. Y. Coffee Exchange

Members New Orleans Cotton Exchange

Liverpool Cotton Assn. (associate).

# Classified Opportunities

#### MEN WANTED

WANTED—Traveling or local men; all sections of the country; profitable side line; commission or salary; good men average \$100 weekly. For particulars address The Sun Chemical Company, Richmond, Va.

SALESMEN. - To sell high-grade driers and paint oil on commission basis. State territory. Address Box 135, Collinwood, Ohio.

SALES AGENTS to sell feed-water heaters, evaporators, condensers and other power-plant equipment; guaranteed territory; com-mission. Address Fisher, 90 West St., New York City.

WANTED—A young man of executive ability and business education to take prominent position in up-to-date factory in this city who is able to invest from \$3000 to \$5000. Don't write unless you mean business. W. B. Ford, Norton, Va.

WANTED—First-class operating millwright, In applying give experience, references and wages wanted. Apply to Waccamaw Lumber Co., Bolton, N. C.

WANTED—Good miller for flouring mill; prefer one who can invest small sum; good opening for good man, Pennsboro Mill Com-pany, Pennsboro, W. Va.

WANTED.—A charcoal tron blast furnace located south of the Ohio River will soon require services of an experienced founder. If position is desired by one with full knowledge of blast-furnace practice, give reason for change. Address No. 861, care Manufacturers Record.

WANTED—Real salesmen acquainted with building and contract work to handle concrete mixers. The American is a batch mixer giving a perfect mix either wet or dry. It is sold under a liberal commission arrangement without requiring any financial investment by the agent. A good seller in other sections and should prove attractive in the South with pushing. Address Cargill Mfg. Co., 567 Buttles Ave., Columbus, O.

AGENTS WANTED to sell lubricating oils, belts, hose, paint, varnish, to contractors, auto owners, mills, factories, etc. Exclusive territory to right party. Oil experience unnecessary. Manufacturers' Oil & Grease Co., Cleveland, Ohio.

WANTED—A man as manager of factory making mill work, sash, doors, etc., who can invost \$3000 to \$5000; must possess character, ability and give good reference. Address No. 867, care Manufacturers Record.

MANAGERS wanted in every county to manufacture and sell Magic Spray. We will supply an energetic man (who can handle sole agents) with the secret formula and the sole right to market our Sprays in any county in the Union for \$100. \$5000 to \$10,000 a year can be easily and honestly made. Full particulars with testimonials from the Chemi Co., 5 North 7th St., Richmond, Va.

WANTED TO CORRESPOND with gen WANTED TO CORRESTOND was a lemen to sell from town to town lots 50x100 feet of undeveloped gold mine property; have had offer made me for this property, but want to sell to best advantage; while clear good commission. Address No. 862, are Manufacturers Record, Baltimore, Md.

AGENTS WANTED.—A Northern manufacturer of crushing machinery wants Southern agents; crusher has wide range and will grind wet or dry to any fineness; especially adapted to phosphate and cement rock, coal, oyster shells, rock, etc. This is a high-grade proposition. For details address No. 863, care Manufacturers Record.

WANTED—A PARTNER.—An experienced and efficient man to take entire charge of a handle factory; must show that he is capable, efficient, honest, and able to take an interest in the business. The plant is located in Arkansas, with an abundance of timber, and now has enough orders ahead at good prices to take the entire output for at least three months. We have an established trade, and for an ambitious efficient man this is an opportunity. Address No. 851, care Manufacturers Record.

WANTED — Responsible and experienced man to become superintendent and manager of a company just organized for the manufacture of hardwood trim, flooring, etc.; must be familiar with this line of business, capable to take entire charge, and able to invest some money; plant is practically new and up to date, is situated at junction of two railroads, and the company has ample capital to operate on large scale; low railroad freight rates to all Eastern cities; an excellent opportunity for a good man. Address P. O. Box 191, Hagerstown, Md.

WANTED — Right man to organize and manage sales company to market newly-patented safety razor; absolutely the best and simplest; just two pieces; adjusts accurately for light or close shaving; retains desired adjustment; impossible to set blade too deeply for safety; quickly arranged for use; optional swinging handle. Address Box 164, Blue Ridge, Ga., stating experience and references, and receive information.

Rate 20 cents per line per insertion. Minimum space accepted, four lines. Maximum space accepted, 24 lines. Allow seven words per line. Terms: Invariably cash with order; check, postoffice or express order or stamps accepted. No display type used. Questionable or undesirable advertisements will not be accepted. The assistance of our readers in excluding undesirable advertisements is requested. We reserve the right to refuse any advertisement. No patent medicine, whiskey or mining stock advertisements accepted. Rate for special contracts covering space used as desired within one year, as follows: 100 lines, 18c. per line; 300 lines 16c. per line; 500 lines or more, 15c. per line.

#### SITUATIONS WANTED

ENGINEER who recently constructed hydro-electric power development will be open for engagement soon. Address No. 857, care Manufacturers Record.

A MAN with \$2000, practical in the manufacture of furniture, desires to connect with a factory or organize a plant, to act as foreman, superintendent or manager.

Address No. 850, care Manufacturers Record.

SITUATION as office manager or credit nan in a Southern or Southwestern city; 5 vonrs' experience; up-to-date methods; best

YOUNG CHEMIST, university graduate, cith practical experience in commercial re-earch laboratory in large Northern city, de-ires to locate in South. Address No. 884, are Manufacturers Record.

ANY responsible cotton-off company who might desire the services of an experienced and capable superintendent or engineer will do well to communicate with the undersigned and hear from a man who wants a position and can get results from the mechanical department of any well-organized oil mill. Address M. B. H., P. O. Box 615, Charleston, S. C.

WANTED—Position by young man now employed by mill-supply house as salesman, with some manufacturer in kindred line; desire to devote my energy and talent to some one line; can change January 1; am single and will go anywhere, but prefer Western territory; am sober and industrious and can furnish references; will only consider place with reliable house. Address No. 866, care Manufacturers Record.

RENSSELAER POLYTECHNIC INSTI-TUTE, TROY, N. Y.—Courses in Civil, Me-chanical and Electrical Engineering, and General Science, leading to the degrees of Civil Engineer (C.E.), Mechanical Engineer (M.E.), Electrical Engineer (E.E.), and Bachelor of Science (B. S.). Special courses in engineering and science. Splendidly equipped new engineering laboratories. Send for catalogues to Registrar.

COMMERCIAL STATE BANK, Birming-ham, Ala. State depository. Prompt atten-tion to Alabama collections.

THE PALMETTO NATIONAL BANK, Columbia, S. C., capital \$250,000, solicits accounts of banks, firms, corporations and individuals, either commercial or savings accounts.

#### HOTEL FOR SALE

HOTEL FOR SALE.—One of the finest hotels on the Galveston Beach, consisting of 30 rooms, with modern conveniences; all car lines pass the hotel; one block from the popular bathhouses; surrounded by all the beach amusements. This hotel faces the Gulf of Mexico, located on the Galveston beautiful boulevard, has an elevation of 22 feet above the gulf, has the reputation all over the State of Texas as one of the best hotels in Galveston. Here is an opportunity for a good hotel man. Galveston Beach is growing more popular every year. Write for further particulars. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

#### GRANITE QUARRY FOR SALE

WILL SELL OR LEASE fine granite quarry of about 30 acres, situated 40 miles south of Atlanta, Ga., on the Central of Georgia Raliway; granite is finest quality, easily quarried and most excellent for monumental and building purposes. Specimen cubes on exhibit in American Museum of Natural Hitsory, New York city, and State Capitol, in Atlanta. Correspondence solicited. Address Lock Box 74, Newnan, Ga.

#### MONEY WANTED

TEN PER CENT. TO YOU.-Wanted-Money in large or small amounts, to loan on land in the Pecos Valley of Texas; absolute security. E. Olds, Angeles, Tex.

WANTED—Money to handle at good rate of interest; first-class security furnished; can handle \$25,000 or more on best real estate security; will guarantee 7 per cent. interest clear to lender; will give Security National Brank for reference; money will be handled through that bank. Write J. K. Green, Mayor of Dewey, Okla.

#### BUSINESS OPPORTUNITIES

A MAN WITH \$15,000 can obtain a clean live business paying over \$10,000 per annum. It will bear closest investigation. Unusual and imperative reasons occasion selling. Address P. O. Box 1031, Richmond, Va.

WANTED—To get in touch with railroads or large manufacturers operating in the South or Middle West, with a view of contracting gray fron castings. We are equipped to make large and small castings, including cylinders. Our local conditions are favorable to cheap cost of production, and we are able to offer special inducements to large consumers. Correspondence invited. Address No. 860, care Manufacturers Record.

TURPENTINE.—We hold thirty years' lease under official sanction on three million acres turpentine pine in Mexico; solid body; annual rental 37500. Will take stock in full consideration in company composed of reliable nava stores operators, organized to take over the lease and exploit property, or act as holding company for purpose of subletting. Full details to earnest inquirers with financial standing. The C. E. Way Land Co., Suite 514 Frost Building, San Antonio, Texas.

FOR SALE—Hardware and implement business in one of the best towns in Kentucky. Better than \$4999 net profit last year. It will be more this year. A gill-edged proposition that will bear investigation. Five to six thousand dollars required. Box 193, Russell-ville, Ky.

GREAT opportunity for manufacturing plant in one of the best towns in the South; on main line of two great railroads; unexcelled water power; something new; \$10,000 will pay handsome dividends from the start and will increase yearly. Write quick to R. B. Brown, Callahan, Fla.

WANTED—To contract for pine, oak or cypress tie timber; timber to be located in Louisiana or Mississippi; contract to be based on stumpage rates; will purchase small tracts outright if price is attractive. Dyer Timber Co., Ltd., Box 87, Morgan City, La.

FOR SALE—In New York city, part or whole, a complete and up-to-date plant, gas and electric lighting fixtures, art glass deco-rative work, holiday specialties, lamps, etc.; established trade; limited investment. Ad-dress No. 865, care Manufacturers Record.

FACTORIES LOCATED, factory buildings in the principal cities to rent, factories, sawmills, dour mills, warehouses, real and personal property sold or exchanged. Timber, grazing and farm lands sold or exchanged. Timber, grazing and farm lands sold or exchanged. Office space, desk rooms and Chicago addresses arranged for. High-class manufacturing stocks and bonds for sale and exchange. Offer what you wish to sell, inquire for what you wish to sell, inquire for what you wish to sell, inquire for what you wish to buy. Negotiations confidential Business promptip executed. Correspondence invited. Kreis & Company, 167 W. Washington street, Chicago, Ill.

MANUFACTURERS producing articles of merit suitable for the mail-order trade will please send information and catalogues to Box 44, Jacksonville, Fla.

#### MAPS AND BLUE PRINTS

MAPS OF TEXAS COUNTIES.—We make blueprint maps of nearly all Texas counties and several Louisiana parishes. Write for prices on those desired. Singleton Bryan & Co., Beaumont, Texas.

FREE SITES and other liberal assistance; cheap fuel; natural gas, oil, coal and abund-ant water; six railroads. Address Chamber of Commerce, Wichita Falls, Texas.

BARGAIN in warehouse and factory sites on B. & O. R. R. at Pa. Ave. and 22d St. S. E.; sewer, water, gas, electric power and light; 20 minutes on Capt. Traction R. R. to 7th and Pa. Ave. N. W. R. F. Bradbury, 2228 Pa. Ave. S. E., Washington, D. C.

#### TYPEWRITERS

IF you are interested in purchasing a high-grade typewriter and do not care to invest \$100 asked by the manufacturer, we would like you to investigate our remanufactured machines. Enterprise Exchange, Inc., 609 E. Baltimore St., Baltimore, Maryland.

#### LOCATIONS SECURED

I CAN FIND YOU A LOCATION for your sawmill or slack-barrel stave factory. Write for particulars of my plan and tell me about what you want. Jo A. Parker, Parma, Mo.

#### INDUSTRIES WANTED

#### STAVE FACTORY WANTED

WANTED.—Asheville, N. C., has 38 mlies paved streets; unlimited supply of pure water; cheap electric power; has within radius of 160 mlies of city 15,000,000,000 feet saw timber, 5,000,000,000 purce, 3,000,000,000 feet saw timber, 5,000,000,000 hardwood; has in addition lock, 6,000,000,000 hardwood; has in addition 2,000,000 cords pulp wood, 1,000,000 cords chestnut add and pulp wood, 5,000,000 cords of other timbers suitable for stave material, and not a stave factory in entire territory. Write Board of Trade.

#### STEEL BOLT, NUT AND RIVET FACTORY

STEEL BOLT, NUT AND RIVET FACTORY
STEEL BOLT, NUT AND RIVET FAC.
TORY WANTED—An excellent opportunity is now open in a Southern State for an experienced manufacturer with some capital to locate such a factory. A similar plant in the South does not today exist. The home market is large, but must depend entirely upon shipments from far-distant Northern cities, cost of manufacture is lowest in the country. Steel, coal and low-priced power to be laid near at hand. Intelligent labor easily obtained at reasonable wage scale. City offers exemption from taxation for term of years. For further information refer to File No. 22508 and address M. V. Richards, Land and Industrial Agent, Southern Rallway, Room 52, 1329 Penn. Ave., Washington, D. C.

#### MISCELLANEOUS

YOUR FACTORY AT TULSA will command the Middle West; natural-gas power only \$2 to \$5 H. P. per year; 26,000 population; ample labor, materials; great oil accoal fields; on large river; four trunk rallways; 32 thriving factories already. Write Bureau of Information, Tulsa, Oklahoma.

CLEVELAND, TENN., WANTS YOU.—The best town in the Southeast, with a hydroelectric development of \$2,000 initial horse-power for manufacturing purposes, final development \$2,000 horse-power. Free manufacturing sites; exemption from city and county taxes; ample railroad facilities; spring water pumped to all parts of the city; cheap raw materials; 186 miles of pite roads in county; fine farming and trucking section; best of public utilities; cheap white labor; cheap power; ideal location for cotton mill, furniture factory and brick-manufacturing plant; good climate; most rapidly developing city in the Southeast. Write Commercial Club, Cleveland, Tennessee.

VICTORIA, TEXAS, head of navigation of Guadalupe River: center of cotton, corn, truck and citrus fruit-growing district of South Texas; country rapidly developing; opportunities for many industries. If interested in the coastal section of Texas, write for booklet "D" to the Secretary of the Progressive League.

SUFFOLK.—The best manufacturing and distributing point in Virginia; six railroads and water transportation; plenty of labor; cheap fuel; electric power; seventy manufacturing plants in successful operation; oportunity for furniture and woodworking plants and any wholesale, jobbing or manufacturing business; center of tidewater richest farming section to be found; healthy; excellent schools and churches; filtered water, gas and sewer. Write Board of Trads, Suffolk, Va.

"BUSIEST AND BEST BUILT CITY IN TEXAS," Wichita Falls possesses unsur-"BUSIEST AND BEST BUILT CITY IN TEXAS," Wichita Falls possesses unsurpassed natural resources and advantages. Offers exceptional opportunities for investors; free sites for manufacturing establishments; cheap fuel; natural gas, oil, cosi, electricity and abundant water from the largest body of water in Texas; six rail-roads; raw material at hand; latest approved public utilities; creosoted wood block pavement throughout business section; over fifty miles concrete sidewalks. Most rapidly developing city in Southwest. Handsome booklet and detailed information upon request. Address Chamber of Commercs, Wilchita Falls, Texas.

Milledgeville, GA., with its inex-haustible supply of hardwood and kaolin, central location, low freight rates, excellent transportation facilities and ideal climate, offers unusual opportunities for manufactur-ing industries of all kinds. Before locating elsewhere write Young Men's Business League.

DEWEY, OKLAHOMA, people want to furnish cheap gas and a free site to any good manufacturing plant, whether great or small, that will come to their city. Two good lines of railroads and good prospects for other lines to build through Dewey. We have large cement plant now turning out 3000 barrels of cement per day. Fine farming country all around. Large gas and oil field. Write J. K. Green, Mayor of Dewey.

#### INDUSTRIAL PLANTS FOR SALE

#### ELECTRIC LIGHT AND POWER PLANT

ELECTRIC LIGHT AND POWER PLANT

ELECTRIC LIGHT AND POWER PLANT
for sale, consisting of one 11x10 Ideal engine,
with D. C. 40 K. W. Westinghouse generator;
one 11x12 Ideal engine, with D. C. 50 K. W.
Westinghouse generator; battery of two &
H. P. return tubular bollers, pumps, heaters,
etc.; all in first-class condition; can be seen
at the Title Guarantee Building, Birmingham, Ala., where it will be in daily use until
October 1 next. An opportunity for securing
a first-class plant cheap. Address Title Guarantee Loan & Trust Co., Birmingham, Ala.

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# Classified Opportunities

#### LUMBER MANUFACTURING PLANT

FOR SALE—180,000 acres L. L. pine and complete modern mill costing over \$600,000; a going plant; will cut one and a haif billion feet and three million cords pulpwood; land can be colonized and sold for more than purchase price. We have several smaller plants for sale also, and large tracts of timer lands. James & Colby, Galveston, Tex.

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for lands. James & Colby, Galveston, Tex.

FOR SALE—Complete lumber manufacturing plant, consisting of two-band-saw mill, planing mill, box factory, oak-flooring plant, dryklin, office, store, blacksmith shop and hirty-five dwelling-houses, besides sheds, bara, cornerlb, icehouse, etc.; about forty forty-five acres of river bottom land, exclusive of the buildings; situated at the crossing of the Kentucky River and L. & N. Railread. Parties quitting business for private reasons and will sell at a reasonable bargian price. For full particulars address The Burt & Brabb Lbr. Co., Ford, Ky.

PLANING MILL Chattanooga, Tenn-complete equipment; fine location; good basiness; owners going into other business. Will sell at great burgain and easy terms. Injon Lumber Co., Chattanooga, Tenn.

#### MANUFACTURING PLANT

GREAT CENTRAL CHICAGO DISTRICT, small plant, about 65,000 sq. ft. land, on Belt Line: brick and concrete buildings about 1,000 sq. ft. Address C. L. Hartwell, Chicago Heights, III.

## FOUNDRY, MACHINE, SASH AND BLIND FACTORY

FOR SALE OR LEASE.—Foundry, machine, sash and blind factory, located in the heart of Salisbury, N. C.; also 184 acres timber land, located on R. R., near Whitney, N. C. Address Box 186, Salisbury, N. C.

# MINERAL AND TIMBER LANDS WATER POWERS AND MISCELLA-NEOUS PROPERTIES

WOULD like to correspond with parties wanting a nice grade of oak, poplar and pine lamber crossities, nice water-power or sup-posed rich gold mine; will allow it listed. R. M. Twitty, Union Mills, N. C.

k. M. Twitty, Union Mills, N. C.

WRITE HELLBERG & BLAIR, 418 Roberts-Banner Bidg., El Paso, Texas, for information about business opportunities of all kinds and investments in town lots in the new town of Columbus, situated in the wonderful Lower Mimbres Valley, New Mexico, 74 miles west of El Paso, on the El Paso & Southwestern R. R. Pure soft shallow water for irrigation. Free Government land. Patented land at from \$15 to \$35 per are.

\$6,000,000 IN THREE YEARS.—Invest in grows so must its capital city develop. The increased value of Washington real estate in the past three years was approximately \$6,000,000. Did a portion of this represent year profits? We are now placing on the market one of the best-located subdivisions in the choice northwest section, fronting one mile on Sixteenth street, and overlooking the National Rock Creek Park. The future of this section will make this the best investment in the suburbs of the national capital. For plat and full information apply to Robert E. Heater, 411-412-413 Colorado Building, Washington, D. C.

FACTORY SITES, Business Property, Resi dences and Farms. If interested in the metropolis of the Southwest or its territory. write for free land list and booklet on Houston, Texas (where 17 railroads meet the sea). or make your wants known. Bank references if desired. Central Land Co., 303 Theater Bldg., Houston, Texas.

#### COAL LAND FOR SALE

FOR SALE—Coal lands in Kanawha, New River and Coal River fields, and business, residence and factory sites in Charleston, W. Va. Address Robson & Nelson, Charles-ton, W. Va.

#### MINERAL LAND FOR SALE

WE ARE IN CONTROL. fee delivery (titles perfect), of large boundaries in Tennessee coal, iron and mineral belt. Surveys 7,000 to 90,000 acres, convenient to transportation, having on it and near all the raw material needed for manufacturing purposes, good bituminous, domestic and coke-making coal; veins show large average tonnage per acre and easy mining cut, and abundance of high-grade iron ores. These valuable holdings can be delivered at comparatively low figures, one-half of what it is in reality now worth, to genuine buyers who can show ratings or bank references to warrant the ability to promptly take over these lands. One but principals need reply. Open barging to direct buyers. Address J. C. Lindley, Greensboro, N. C.

#### COAL MINE FOR SALE

A LIGNITE COAL MINE FOR SALE—A SNAP.—Situated in Milam county, Texas. 10 acres fine vein of fine lignite; mine in fine condition; machinery all new; running new in full blast and making good money; best kind of market for the output; commissary and workmen's houses all in good condition; will hear the strictest investigation. Price \$30,000. John H. Grist & Co., Austin, Tex.

#### CUT-OVER TIMBER LANDS

4000 ACRES level rich cut-over timber land, # per acre. 14,750 acres cut-over timber hill and, \$8.56 acre. Hobert T. Sessions, Win-trop, Ark.

#### CUT-OVER LANDS AND FARMS

FOR SALE—Cut-over lands in South Georgic on railroad; either small or large tracts; price \$5 per acre in tracts over 5000 acres. Brewster Lumber Co., Savannah, Ga.

#### RED CEDAR WANTED

WANTED—To buy a large tract of red cedar. Mail sample of wood. James & Colby, Galveston, Tex.

#### TIMBER LAND FOR SALE

FOR SALE—Two large, desirable timber tracts directly on railroad; attractive figure to carly purchaser. For particulars write 8. Shafer & Co., Pinoville, Ky.

8. Shafer & Co., Pineville, Ky.
PINE AND CYPRESS TIMBER LANDS on railroad in Florida; cut-over lands, suitable for colonization, located on railroads in both Florida and Alabama. Power & Brooks, Box 82, Montgomery, Ala.
FOR SALE—21,000 acres of virgin forest land, all hardwood timber. The timber on the land will pay for it, and the land when cleared will produce a bale of cotton to the acre. Porter & Porter, Sherman, Tex.

FOR SALE—95,000-acre tract Florida timber land; well located; deep-water transportation; cruiser's report, 700,000,000 fe0,000,000 fed typress, 50,000,000 maple, ash and hickory; easily logged Address J. B. Jarvis, P. O. Box 151, Chihuahua, Mexico.

FOR SALE—Eight thousand acres of timer in southern part of South Carolina on outhern Railway, consisting of pine, popir, beech, etc.; will cut ten thousand to freen thousand feet per acre. J. A. Willis, arnwell, S. C.

FOR SALE—Fifteen hundred acres of cypress in lower part of South Carolina, on Southern Railroad; very fine timber. J. A. Willis, Barnwell, S. C.

FOR SALE BY OWNER-29,000-acre tract of choicest hardwood timber land in State of Alabama; timber all virgin and very large, tall and straight; 35% yellow poplar, 35% forked-leaf white oak, 29% white hick-ory, and 10% other hardwoods. It is the best hardwood timber tract in the State. Will deal with bona-fide purchasers only. E. E. Woodcock, 1716 Milan St., New Orleans, La.

ADVERTISER desires correspondence with principals; can sell quick two best cypress properties in Florida; price, terms and title right; maps and cruised by 40°s. Address No. 859, care Manufacturers Record.

TIMBER FOR SALE CHEAP IF SOLD AT ONCE.—7500 acres in Southern Virginia; 4617 acres in North Carolina; both excellent propositions; near railroads. Inquire Box 55, Winchester, Va.

SOUTHERN TIMBER LANDS.—Large tracts of pine, cypress and hardwood all over the South. James & Colby, Galveston, Texas.

#### FARM AND TIMBER LANDS

I HAVE 10,104 acres fine bottom cotton and corn land in Centrai Texas, in rain belt; 5000 acres in high state of cultivation; balance heavy timber, of which 95 per cent. is tillable: 40 sets of tenant-houses; two cotton gins and one sawmill goes with the land; three-quarters to one bale of cotton per acre being made this season. Big money can be made in colonizing this tract with Italian farmers, and correspondence is solicited with anyone in position to handle a colonization proposition of this kind with headquarters in Chicago or New York city. A. G. Nordstrom, Box 443, Austin, Texas.

AGRICULTURAL TIMBER LANDS FOR SALE.—We have four tracts of hardwood timber, 1700 to 3500 acres, on which the tim-AVAILULEURAL TIMBER LANDS FOR SALE.—We have four tracts of hardwood timber, 1700 to 3500 acres, on which the timber will pay more than double the cost of the land, and all are in the very best farming districts of Texas, on or within three miles of railroad towns, and can be subdivided after the timber is cut off and sold for farms. Price \$12 per acre; easy terms. Write for full particulars. T. H. Barrow & Sons, Austin, Texas.

Write for full particulars. T. H. Barrow & Sons, Austin, Texas.

GEORGIA FARM LAND FOR SALE.—I own in fee simple, titles perfect, 9781 acres of fertile farm land, lying along two trunk-line railroads for seven miles and within 28 miles of Savannah, Georgia. On this land is a good stand of yellow pine, estimated to cut 20,000,000 feet, with thousands of cords of firewood, posis, ties and other small timber. Also good 8-room house, a barn that cannot be duplicated for \$1000, store building and other houses, with railroad station, stores and church on the property. Low transportation rates by reason of water competitive rates prevailing at Savannah, giving prompt shipping facilities to Northern markets for vegetables and fruit, with excellent market at home the year round. Healthy location, good water, and nothing better in Georgia as a colonization proposition. Will not divide tract, but with financially able parties will trade outright, or put in property and take interest in development of same. For price and terms and further particulars address W. W. Robertson, Norfolk, Va.

WE HAVE fifteen thousand acres of land in one body, ten thousand heavily timbered and five thousand as fine farming land in the State; next to famous cabbage belt, near Youngs Island, S. C. We wish to develop it, cutting timber, turpentine, finto hundred-acre truck and cotton farms. Will sell half interest to develop it at seventeen dollars per acre; makes a bale and half cotton to acre; heavily timbered; close to market; plenty labor; fine pline land; climate as good as Summerville, S. C., for health. Apply early, and none except men meaning business need apply. Land close to this cannot be purchased for one hundred dollars per acre. The Sea Island Plant & Seed Co., Meggett, S. C.

per acre. The Sea seminored per acre. The Sea seminored per acre.

200 ACRES best black waxy land in Texas; \$4000 home; windmill on lasting well; all in cultivation; \$125 per acre.

340 acres black loamy timber land on Navosot river; \$30 per acre.

162 acres black loamy improved land, 6 miles of Waco, \$125 per acre.

112 acres black waxy improved land, near school and church; cheap at \$100 per acre.

We also have many other desirable McLennan county farms which took prize at Paris Exposition. Write us for full particulars.

Eldes & McDonald, Room 614 Amicable Bldg.,
Waco, Tex.

FOR SALE-Large and small plantations in the rich Red River Valley, cheap and on easy terms; also large tract of hardwood. Apply to E. J. Iles, Alexandria, Louisiana.

TIMBER, FARMING AND RICE LANDS for sale near Wilmington, N. C., on and near new railroad to Southport: new highways now building. Rare bargains for cash. Also an ideal dairy location near Wilmington. E. W. Taylor, Winnsboro, N. C.

I HAVE BARGAINS IN TIMBER TRACTS. large colonization propositions, cut-over lands and reclamation tracts in any size wanted up to 150,000 acres from \$2.50 per acre up. Wm. R. Taylor, Land and Timber Investments, 508 Perrin Building, New Orleans, La. Established 1898. Sales over \$5,000,000.

COLONIZATION LANDS
GULF COAST LANDS.—We have large tracts for colonization in all sections from \$5 an acre up. James & Colby, Galveston, Tex.

COLONY location in South Georgia; 6000 acres fine trucking lands on two railroads and navigable river; good water and health; titles good; terms easy. H. A. Cannon, Waycross, Ga.

13.284 ACRES in Gaines county, all tiliable, in the shallow water belt of West Texas. This is one of the finest ranches in West Texas, composed of fine agricultural land; subdivided in tracts of 492 acres; a fine colonization proposition; \$20 per acre; \$5 due the State; low rate of interest; will take one-third in good trade; terms on balance. Cheatham & Haney, Room 2 Provident Bidg., Waco, Tex.

Waco, Tex.

COLONIZATION LAND IN SOUTH GEORGIA.—We have on the Atlantic Coast Line Railroad, between Tifton and Waycross, Ga., several nice tracts for colonization. We can sell you five, ten to fifteen thousand-acre tracts, none of it further than four and a half miles from railroad station. This is high-class farm land, and will bear close investigation. Write C. L. Parker, Tifton, or McLendon Brothers, Atlanta, Ga.

investigation. Write C. L. Parker, Tifton, or McLendon Brothers, Atlanta, Ga.

SAFE INVESTMENTS THAT PAY.—U. 8. census report for 1910 shows that Texas farm land values increased 214% in 10 years. Texas has just started to develop, and the next 5 years will bring startling results, due to heavy influx of people from all parts of the world, and also augmented by the completion of the Panama Canal. If you want an investment, investigate this proposition: 11,600 acres good farm land, 85% of which is smooth prairie; will grow any kind of crops; located in the rain belt, where the climate is ideal, 4½ miles of Edna, in Jackson county. A fine colonization proposition that will sell in small tracts for \$50 per acre. Owner must sell as a whole, and will sacrifice for quick sale at \$22.50 per acre; one-fourth cash; balance casy terms, with release clause. Write A. A. Ritcheson & Co., Austin, Texas. Reference, Austin National Bank.

TRACT FOR COLONIZATION.—12,000 acres in Lavaca and Jackson counties, Texas; 36 per cent. tillable; black waxy and black sandy land. On both sides of Lavaca River. Numerous settlements and good wells of water on tract; all subdivided and ready for colonizing. Will give good terms on this tract. Emil Locke, No. 712-13 Gibbs Bidg., San Antonio, Tex.

San Antonio, Tex.

RANCH FOR SALE

THE LAST LARGE BODY OF GRAZING LAND IN NEW MEXICO.—25,738 acres, in solid body, good grazing land, at the old-time bargain prices. This is the Ceboileta grant, located mostly in Valencia county, 35 miles west of Albuquerque, 9 miles north of the Santa Fe Railroad. This probably is the finest body of land in New Mexico for grazing, being mostly table land and summer pasture; several permanent and everlasting springs: excellent grass throughout the whole tract. The surrounding country is underlaid with coal, and it crops out at various places on this grant. In order to settle an estate, the court having ordered a sale, It can deliver this land at \$2 per acre, which makes it the best investment today in the Southwest. A fair amount of this purchase price can remain on mortgage if desired, or would consider a portion of its value in clean unincumbered income property. N. R. Lowry, Austin, Texas.

#### FARM, FRUIT AND TRUCK LANDS

#### -ALABAMA

ALABAMA.—Good health, fine water, love-ly climate; large and small farms at bar-gain prices; grow anything. Write now for list. G. A. Taylor, Opelika, Alabama.

#### ARKANSAS AND LOUISIANA

OUR FALL LIST of improved farms in Nevada county is now ready for distribution. Send us your name. Green & Millwee, Pres-cott, Ark.

FOR SALE—Cotton and rice plantations; one in Louisiana and one in Arkansas; contain two thousand acres each; fully improved; admirably located; perfect fitles; one crop should pay for them. For price and terms address No. 854, care Manufacturers Record.

OWNER must sell 320 acres best-located rice and cotton land in Arkansas; title per-fect; price very low and terms to suit; no waste; tine range; adjoining farms netting twice their cost this crop. Address No. 858, care Manufacturers Record.

FLORIDA
FLORIDA FRUIT AND TRUCK LANDS—
We offer 10-acre tracts in that part of the
State of Florida lying in Hillsboro county
and Lake Butler region, in the Pinellas
peninsula, on the west const of Florida, on
the Gulf of Mexico: with its elevation and
rolling bills is especially suited for fruits of
all kinds—grapefruit, oranges, grapes, dates,
figs. bannans, peaches and other fruits, as
well as vegetables, pointoes, corn, beans,
peanuts and all the varieties that can be
produced anywhere. The Tarpon Springs
district offers the most favorable conditions
for farmer, home seeker and investor. Fertile lands in small tracts, easy monthly payments: guaranteed title. Investigation invited. If you want a bargain and a home in
the most destrable part of Florida, write
now for particulars and reservation. Tampa
& Tarpon Springs Land Co., Tampa, Florida.

FLORIDA FARMS ARE FORTUNES,— Our soil similar to fertile sections Iowa, Mis sourf: easy-payment plan. Write for booklet Mitton Land & Investment Co., Marlanna, Fla

WHY PALMETTO LEADS.—The 800,000 boxes of fruits and early vegetables attests the superiority of soil, climate and irrigation necessary to produce such crops. The ease with which such crops are handled by rail and water make it an ideal place for fruit and vegetable growing. The Manatee River, Terra Cinn and Tampa bays furnish ideal salt-water fishing, boating and bathing. For further information address The Manatee River Board of Trade, Palmetto, Florida.

#### GEORGIA & TENNESSEE

GEORGIA & TENNESSEE

REAL ESTATE FOR SALE.—Improved farm lands in finest farm sections of East Tennessee and North Georgia for all-round farming, fruit growing; climate, water, schools, pike roads, good market, etc.—these excel any part of the U. S. Address J. D. Wyrick, Lenoir City, Tenn.

BUY A HOME IN MIDDLE TENNESSEE. Fertile soii and fine bluegrass; mild, healthful climate, fine roads and good school system; land produces 20 bu, wheat, 50 bu, corn; will grow anything a farmer can raise, and there's never a crop failure; finest stock country on earth, and excellent for dairying and poultry. Ranging in price from \$15 to \$100 per acre. Write for particulars. E. W. Bryan, Lebanon, Tenn.

230,000 ACRES, Coahulla, Mexico; water plenty; good pasture; soil rich; produces corn, wheat, cotton, variety of fruits; per acre, 79c. Advertise bargains only. A. L. Hodge, Dallas, Tex.

230,000-ACRE RANCH, Coahulla, Mexico: 79c, per acre. I will make one of ten to take \$17.370 interest. Where's the nine Hands up, quick! A. L. Hodge, Dallas, Tex.

Hands up, quick! A. L. Hodge, Dallas, Tex. 220,000 ACRES in the State of Coahuli... Mexico, in the famous Laguna District. This land will produce anything that grows in the temperate zone, especially cotton. There is an abundance of never-failing water, one spring now irrigating 250 acres. Soil is sandy loam. The principal feature of this tract is the entire absence of gravel near the foothills. The high lands of the tract afford the finest pasturage, and she abundance of springs makes it unaccessary to pump water for stock. One big ranch-house and fourteen touses for laborers, 250 head cattle, 6 mules, 3 wagous, hack and harness to match. Titles perfect and guaranteed. This can be bought for \$1.25 an acre. Henry Cass & Fry, 30 City National Bank, El Paso, Tex.

# Classified Opportunities

[CONTINUED FROM PAGES 76 AND 77.]

3555 ACRES of good hill cotton land for sale; now in successful operation; well supplied with negro labor. The plantation lies between two branches of the Illinois Central Raliroad; nearest shipping point, four miles from the dwelling. The land corners within half mile of the raliroad. A sufficiency of cabins for tenants, stables, cribs, cotton pens and all outhouses. Forty-five head of mules and horses, cows, farming implements and feedstuff. Price very low. Terms good. Address A. C. Leigh, Grenada, Miss., bonadide owner of the property.

#### ENORTH AND SOUTH CAROLINAS

ONE HUNDRED FARMS FOR SALE in North and South Carolina; all sizes; prices right; terms reasonable. C. A. Roach, Dil-lon, S. C.

FARM FOR PROFIT in Eastern North Carolina, the "Nation's Garden Spot." Leads other localities for vegetables, fruits and staple farming on small capital. Homeseek-ers and investors, write Carolina Trucking Development Co., 815 Southern Bldg., Wil-mington, N. C.

TEXAS LAND FOR SALE.—If you want black land farms or colonization proposition, write me now. Remember, I pay your rail-road fare if you buy from me. J. H. Russell, Abilene, Taylor county, Texas.

PECOS PALISADES LANDS.—Ranch and rrigated lands in lower Pecos Valley. S. L. 2stes, 405 North Texas Building, Dallas,

IRRIGATED FARM. — 350 acres of rich sandy loam, level, and to be Irrigated from the famous Elephant Butte Dam, now in course of construction. This land can now be bought for \$35 an acre. Write us for full description. Loomis Bros., El Paso, Texas, Mexican Timber Lands.

FOR SALE-23542 acres prairie land, located on Santa Fe Railroad and on public road (shelled) only 13 miles from Beaumont and one-quarter mile from Fannett; suitable for general farming or for subdividing into smaller tracts. Title perfect. Price \$27.39 per acre. Also other lands suitable for subdivision. Texas Reulty Co., Beaumont, Texas.

IRRIGATED LANDS.—Parties in the North, East and Middle West interested in improved and unimproved irrigated lands and ranch property in the great Pecos section, communicate with us. Pawkett & Davis, Pecos, Tex.

JAS. GOODE REAL ESTATE CO., ranch nd irrigated lands. Office, Orient Hotel, ecos, Tex.

10,000-ACRE RANCH.—Large per cent. agricultural land; fine grass; fairly well improved; well watered; located in Southwest Texas, where the climate, health, fishing and hunting is unsurpassed. Price \$7.50 per acre; good terms. Walton & McCauley, 105½ South 4th St., Waco, Texus.

TEXAS LANDS.—Large tracts of the cele-brated Gulf Coast fruit and truck land, where crops grow and flowers bloom every month in the year. James & Colby, Galves-ton, Texas.

SAN BENITO, TEXAS, IRRIGATED LANDS.-10 acres or more, close to shipping LANDS.—10 acres or more, close to shipping stations of the Interurban Railroad; big canal through every tract. Ask for booklet, Engle Bros., 412 Gibbs Bidg., San Antonio, Tex.

TEXAS COTTON AND SUGAR PLANTA-TION. — 2000-acre plantation on Colorado river, near Engle lake; railroad switch on property; about 1009 acres river-bottom land in cultivation; 18 houses, barns, cribs and cotton gin, grist mill, blacksmith shop and many other improvements; 200 head stock; about 49 horses and mules; planted this year in cotton and corn; finest pecan grove in South Texas on property. Altogether is finest and cheapest thing in State. Every-thing goes for \$35 per acre; easy terms. Kullenberg Realty Co., 202 Gibbs Bidg., San Antonio, Texas.

YOU SHOULD JOIN US in owning a exas Bermuda onion farm. We are develping 500 acres of the best onion land in exas. 3 acres of our land made \$1900 profit. o-operation with us means wealth. You annot lose. All land irrigated from arte-tan wells. No water troubles. One hundred cres in each farm. 100 shares per farm. 50 per share, monthly payments of \$5 per exact, and per perce. Let us send you particulars. Zavala nion farms Company, Gibbs Building, San ntonlo, Texas.

THE FRIO VALLEY WINTER GARDENS, La Salle county, Southwest Texas, a colony of 100,000 acres level rich black sandy loam in famous artesian belt; grow oranges, figs, Bermuda onlous. We are opening Fowlerton, a new town on new railroad in heart of the rolony. Gunranteed improvements on town-dire. A 19-acre farm and free residence lot in terms of \$15 cash; balance \$10 monthly. Write for booklet A, prices, plats, etc. Fowlers Land Co., Frost Building, San Antonio, Texas.

80 ACRES irrigated land, 1½ miles N. E. of Harlingen, Cameron Co.; best land in valley; \$3500 worth of cabbage off 33 acres; \$2000 for cotton off 36 acres in 1910; by September 1 this year owner gathered 63 baies from 65 acres; one acre produced \$135 in cabbages in March, then made a bale of cotton; specially adapted to sugar-cane; owner has other business and will take \$150 per acre; well improved. Also, 13 acres adjoining town for \$3500; land around has been selling for \$300 per acre; suitable for addition. Dunn & Baggett, Austin, Texas.

GREATER HOUSTON (Population over 100,000).—Just twelve miles out on Main street (Houston's \$200,000,000 thoroughfare) is located North Houston Gardens; 10-acre tracts only \$400; terms, \$25 cash, balance \$15 per month, no interest; five-acre tracts, \$400; terms \$15 cash, balance \$7.50 per month, no interest; 142-acre improved farm 50 miles from Houston, price \$25 per acre. H. 8. Taylor, Scanlan Bldg., Houston, Texas, Member Houston Real Estate Exchange and the Texas Realty Association.

COTTON AND CORN LAND.-12,500 acres, near two good railroads, being one mile from one and two miles from the other; splendid colonization tract; at \$10 per acre; one-fourth cash; balance 6 per cent. Address owner, Dr. C. S. Preston, 1007 Scanlan Bidg., Houston, Texas.

FOR SALE.—Farm at Arcadia, Texas, consisting of five acres and five-room cottage, large barn, chicken-houses, fine well, also large tank for rain water; all improvements in good condition. This land will grow anything. It is fine orange land; has some orange trees on it. Arcadia is 15 miles from Galveston, on the Gulf, Colorado and Santa Fe Railroad, and a growing town. The climate is delightful and healthy. This place can be bought at bargain. J. L. Boddeker & Co., Agents, 410 20th St., Galveston, Texas.

#### VIRGINIA AND MABYLAND

VIRGINIA AND MARYLAND high-class water-front property on the famous Eastern Shore of Maryland, also on the Chesapeake Bay in Virginia, and farms in all the Piedmont section; many bearing commercial apple orchards in the mountains of Virginia. Send for Catalogue S. Southern Farm Agency, 721 Main St., Lynchburg, Va.

#### MACHINERY AND SUPPLIES

WANTED.—Every consumer in the South-west to know that the Texas Rolling Mill Company of Fort Worth, Texas, manufac-tures track spikes, track bolts, machine bolts and nuts: also standard sizes of bar iron. One hundred tons always in stock. Prompt shipments our specialty. Satisfaction guar-anteed.

#### FINANCIAL

FOR SALE-\$50,000 worth first mortgage 8 per cent. notes on improved farm lands located in Central Texas. Cheatham & Haney, Waco, Texas.

SAVANNAH, GA.—Real estate loans paying 6 per cent. to 7 per cent, to the investor; absolutely safe. Beautiful sites for winter homes at Vernon View, the saft-water place near Savannah on the Grand Prize Course ideal winter climate. G. A. Mercer, Law and Real Estate, Savannah, Ga. References: Any bank or trust company in Savannah.

#### PROFESSIONAL

ARE YOU POSTED on twentieth-century patent searching? The engineer service sep-arate from law practice? Read No. 2-B. In-ventor's Pocket Library, free for stamp. Engineer Searching Co., Fleming Bldg.. Washington, D. C.

#### PATENT ATTORNEYS

PATENTA TORNEYS

PATENTS OF QUALITY.—The valuable and salable kind. Send for free advisory information. Reference to clients throughout the U. S. Geo. R. Hamlin, Patent Lawyer, Inventive Age Bidg., Washington, D. C.

EUGENE C. BROWN, ENGINEER and Patent Lawyer, Suite 40 Victor Bidgs. Washington, D. C., Member Bar U. S. Supreme Court. Patents and Trademarks: Patent Suits for Infringement. Mr. Brown is especially qualified to prosecute cases in Patent Office and patent litigation from both Engineering and Legal standpoints, having been Examiner in U. S. Patent Office for nine years. Send sketch for advice.

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IDEAS WANTED.—Manufacturers are writing for patents procured through me. Seaf for free 72-page guide and "Stepping Stones" (containing over 200 inventions wanted) Personal services. Clients' patents sold free. Trade-marks registered. R. B. Owen, Dept. 12, Washington, D. C.

PATENT YOUR IDEAS.—\$100,000 offered for one invention, \$\$500 for another; book, "How to Obtain a Patent" and "What to Invent," sent free; send rough sketch for free report as to patentability; patent obtained for fee returned. We advertise your patent for sale at our expense. Chandlee & Chandlee, patent attorneys, \$78 F street, Washington, D. C.

PATENT WHAT YOU INVENT.—Your ideas may bring you a fortune. Our free books tell what to invent and how to obtain a patent. Send sketch of invention for free opinion as to patentability. Patents obtained free, H. Ellis Chandlee & Co., successors to Woodward & Chandlee, Sulte 75 Bornot Bidg, Washington, D. C.

PATENTS Secured or Fee Returned. Send sketch for free report as to patentability. Guide book and what to invent, with valuable list of inventions wanted, sent free; \$1,999,090 offered for one invention; \$16,990 for others. Patents secured by us advertised free in World's Progress; sample free, Victor J. Evans & Co., Washington, D. C.

#### PATENTS FOR SALE

WE HAVE recently secured the following patents. Address all communications to sales Dept., Victor J. Evans & Co., Washington, D. C.: John A. Stewart. railroad tle; Albert Wilford, separator and cleaner; John K. Smith, railroad splice bar; F. M. Stephens, automatic stock feeder: Victor Mancini, tire chain; Geo. Scott, boat propelling mechanism; J. T. Owen, drilling device; R. M. Griffith; rail-joint support; John Pennell, lawn mower; Robert O. Toan, sanitary drinking cup; Irving E. Walker, cuff protector; John Leu, hatpin shield; A. F. Hurd, ink bottle; Arthur G. Hunter, wrench; Geo. P. N. Sadier, airship attachment; W. A. Pennington, leveling device for threshing machine; J. W. Mailory and Walter C. Peters, mechine brake; Chas. R. Keating, clamp; J. A. Darst and M. Brittain, oil burner; Roy Howell, faucet; Henry Flanagan, aerial navigating apparatus; Sherman Mahurin, roadbed; John Erickson, drawing instrument; John Ellis, combined rail coupling and chair; W. H. Crawford, valve.

PUBLIC BUILDINGS.

BONDS CONSTRUCTION

MISCELLANEOUS.

#### GOVERNMENT PROPOSALS

PROPOSALS FOR ELECTRIC TOWING Locomotives for the Canal Locks. Sealed groposals will be received at the office of the General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., until 10.39 A. M. November 29, 1911, at which time they will be opened in public, for furnishing the above-mentioned articles. Blanks and general information relating to this Circular (No. 659) may be obtained from this office or the offices of the Assistant Purchasing Agents, 24 State Street, New York City; 614 Whitney-Central Building, New Orleans, La., and 1086 North Point Street, San Francisco, Cal.; also from the U. S. Engineer Offices in the following cities: Seattle, Wash.; Los Angeles, Cal.; Baltimore, Md.; Philadelphia, Pa.; Pittsburg, Pa.; Boston, Mass.; Buffalo, N. Y.; Cleveland, Ohlo; Cincinnait, Ohlo; Chicago, Ill.; St. Louis, Mo.; Detroit, Mich.; Milwaukee, Wis.; St. Paul, Minn.; Chattanooga, Tenn.; Louisville, Ky.; Mobile, Ala., and Galveston, Tex.; Commercial Ciub, Kansas City, Mo.; Chamber of Commerce, Quincy, Ill., and Chamber of Commerce and Board of Trade, Tacoma, Wash. F. C. BOGGS, Major, Corps of Engineers, U. S. A., General Purchasing Officer. PROPOSALS FOR ELECTRIC TOWING Locomotives for the Canal Locks. Sealed

POSTOFFICE DEPARTMENT, Washington, September 13, 1911. Sealed proposals will be received at the office of the Purchasing Agent for this Department until 2 o'clock P. M. October 16, 1911, for supplying all the engraved and printed matter required by the money-order service during a period of four years commencing December 1, 1911. Specifications and samples will be furnished upon application to the Purchasing Agent. FRANK H. HITCHCOCK, Postmaster-General.

T REASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., September 5, 1911. Scaled proposals will be received in this office until 3 o'clock P. M. on the 31st day of October, 1911, and then opened, for the construction (complete except elevator) of the United States Postoffice at Florence, Ala. The building is to be three stories in height, with a ground area of approximately 6000 sq. ft. of freproof construction with stucco facing and stone trim. Drawings and specifications may be had from the Custodian of site at Florence, Ala., or at this office, at the discretion of the Supervising Architect. JAMES KNOX TAYLOR, Supervising Architect.

Supervising Architect.

U. S. ENGINEER OFFICE, Jacksonville,
Fia., September 20, 1911. Sealed proposals for removing wreck Str. "Zeeburg"
from St. Johns River, Fia., will be received
at this office until 12 M. October 20, 1911, and
then publicly opened. Information on application. J. R. SLATTERY, Capt., Engrs.

## NEW BOND OFFERING

### \$35,000 6% Bonds

The Board of Mayor and Aldermen of the Town of Obion, Tennessee, will receive bids for \$35,000 6 per cent. water, light and school bonds at the Mayor's office until 2 P. M. October 18, 1911. For all necessary information address S. J. Harris, Recorder.

## 6% Bonds For Sale

The Snow Flake Lime & Rock Company of Fort Spring, W. Va., offers for sale 6 per cent. bonds maturing in ten and twenty years, secured by mortgage on their plant. For full information address

JOHN S. CRAWFORD, Pres.,
Lewisburg, W. Va.

#### \$20,000 5% Bonds For Sale

\$20,000 Elkin Township bonds, due in 30 years, interest 5 per cent, payable semi-annually. Subscription to Elkin & Alleghany Raliroad. Taxable value of township, \$1,100,-000. \$6000 bonds outstanding. Apply to J. F. Hendren, Attorney, Elkin, N. C.

#### **Bond Sale**

Boild Sale

Bids will be received by the undersigned Clerk until 2 o'clock P. M. November 1, 1911, for \$12,500 of bonds of the Town of Jennings, Florida, to bear interest at 6 per cent. per arnum: interest payable semi-annually; said bonds to run for 30 years.

The right is reserved by the Town Council to reject any and all bids.

For forther information address the undersigned Clerk.

J. C. BARNES.

J. C. BARNES, Clerk for Town of Jennings, Jennings, Florida.

#### Sale of Bonds of Drainage District No. 3, Jefferson County, Arkansas

Notice is hereby given that sealed bids will be received by the Commissioners of Drainage District No. 3, Jefferson County, Arkansas, up to 12 o'clock noon October ich, 1911, for an issue of coupon bonds for said Drainage District in the sum of thirty-five thousand dollars (\$35,000), payment commencing after the tenth year and ending the twenty, per annum from date of issue, payable semi-annually. per annually.

The right is reserved to reject any or all bids.

Address bids to W. C. Hudson, secretary, Pine Bluff, Ark., P. O. Box 676.

### **Pumping Machinery and Laying** Cast Iron Pipe, Etc.

Charlotte, N. C.

Sealed proposals will be received by the Board of Water Commissioners of the City of Charlotte, at the office of the Clerk, and P. M. October 17, 1911, for the following:
Laying about 9 miles of 24-inch cast-iron pine.

pe. Furnishing valves. Furnishing two 300-ho

Furnishing two contribuser motors.

Furnishing two centrifugal pumps (5,000,000 allons capacity each).

Furnishing one 3,000,000-gallon steam pump.

Furnishing transformers and switchboard.

Furnishing two bellows and switchboard. Furnishing two boilers and setting same. Bids for other work and materials will be divertised for later.

DIUS IOF other work and materials will be advertised for later.

Plans and specifications will be on file at the office of the Clerk and at the Engineer's office in Charlotte, N. C.

Copies of specifications, form of proposal, etc., will be furnished on deposit of \$5, which deposit will be refunded on return of same. Map and profile of pipe line will be fernished on payment of \$5.

As an evidence of good faith, each bid must be accompanied by a certified check for not less than 10 per cent, of the amount of bid; but check is to be for \$5000 if bid is on laying pipe line.

The right is reserved to reject any or all BOAND.

BOARD OF WATER COMMISSIONERS.

A. H. Wearn, Clerk.

GILBERT C. WHITE.

NEW BOND OFFERINGS

### \$30,000.00 Bonds of Hillsboro. Texas

Hillsboro, Texas, September 20, 1911. Hillsboro, Texas, september 29, 1911.

Sealed bids will be received up to 8 o'clock
P. M. October 17, 1911, by the Mayor and
City Council of Hillsboro, Texas, for all or
any part of \$30,000 4½ per cent. 40-year coupon bonds with fifteen-year option.

any part of the proposed of the State and approved by the Laws being cordinated with the laws of the State and are instanced for the purpose of paying off \$10,000 floating debts, \$15,000 for the extension and improvement of water system, and \$500 for extension of sewerage. Interst payable semi-annually in November and May as it accrues. We have a bond margin of 45c, and an unused margin after this issue is protected of 9c. Said bonds to be in accordance with the laws of the State and approved by the Attorney-General. Each and every bid must be accompanied by a certified check for 3 per cent, of amount of bid. For further information, financial statement, etc., address J. D. Tomlinson, Mayor, Hillsboro, Texas. or tac, address J. D. Tommhood, horo, Texas. Right reserved to reject any and all bids. J. D. TOMLINSON, Mayor, Hillsboro, Texas.

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#### Sale of Bonds

Notice is bereby given that sealed bids will be received by Wiley C. Rodman, Washington, N. C., attorney for the Board of Commissioners for the County of Beaufort, or by G. Rumley, Clerk to said Board, up to 12 o'clock noon on Monday, the 2d day of October, 1911, for an issue of bonds for said county in the sum of thirty-five thousand collars, payable fifty years after date, interest at the rate of 5 per cent. per annum from date of issue, payable semi-annually.

Any questions as to the validity of said bond issue will be submitted to the Supreme Court at the expense of the county.

The purchaser must refund accrued interest on honds to date of payment for same.

The county reserves the right to reject any and all bids. A cash deposit of 5 per cent. must accompany each bid.

Full information with regard to the tax valuation and indebtedness of the county will be furnished upon application to the undersigned.

WILEY C. RODMAN.

WILEY C. RODMAN, County Attorney,

Or G. RUMLEY, Clerk Board of Commissioners, Washington, N. C.

#### Fifty Thousand Dollars (\$50-000.00) Street and School Bonds

Bonds

Sealed bids will be received by the Board of Mayor and Aldermen of the City of Bay St. Louis, Miss., until the 2d day of October, 1911, for the purchase of \$50,000 (fifty thousand dollars) street-improvement bonds in the denomination of \$100 (one hundred dollars) each, with interest at 5 per cent. per annum, payable semi-annually on the 1st day of April and the 2d of October of each year, for the purpose of improving the streets of the City of Bay St. Louis, to protect same from overflow, caving banks and other like dangers, and for the purpose of purchasing a lot and erecting an additional school building thereon.

The said bonds shall mature 20 years after date, but the city reserves the right to cancel the whole or any part of said bonds at any time after the expiration of five years after the date of issue.

The city reserves the right to accept or reject any or all bids.

By order of the Board of Mayor and Aldermen.

R. W. TOULME, Mayor.

R. W. TOULME, Mayor.
Attest: H. HOOD BEYER, Secy.

#### MISCELLANEOUS

# Machine Tools and Foundry

ROTICE.

The Board of Prison Commissioners of the Texas State Penitentiary system desires to purchase certain machine tools and foundry equipment for use of the Texas State Penitentiary system, and all prospective bidders thereon can secure complete specifications covering all of same by addressing

F. M. NASH,

Master Mechanic,

Huntsville, Texas.

### **Road Grading**

NOTICE TO CONTRACTORS.

NOTICE TO CONTRACTORS.

Murphy, N. C., September 23, 1911.

Sealed proposals will be received by the Murphy Township Highway Commission at their office in Murphy until 2 P. M. October 14, 1911, for grading the Peachtree Road, from Survey Station 14, at Towns Common line, to the mouth of Brasstown Creek, a distance of about seven miles.

The work will consist of, approximately: 55,000 cu. yds. Grading.

700 cu. yds. Grading.

700 cu. yds. Rubble Masonry.

589 lineal ft. Vitrified Pipe.

14,700 pounds Structural Steel.

Plans, profiles and specifications are on file at the office of G. W. Scott, engineer, Courthouse building, and blank forms for

sals will be furnished upon application

proposals will be furnished upon application, to the engineer.

Deposit, five hundred dollars (\$500) cash or certified check, payable to Treasurer Murphy Township Highway Commission.

The right is reserved to reject any or all blds.

Approximately 25 additional miles of grading will be let in the near future.

W. H. WOODBURY, Pres.;

M. L. MAUNEY, Sec.,

Highway Commission Murphy Township.

#### Hotel Building

Hotel Building
CHANGE OF DATE.
NOTICE TO CONTRACTORS.
Macon, Georgia.
Sealed proposals for the general construction of an eight-story fireproof hotel building, costing \$350,000, for the Midland City Hotel Company, Macon, Georgia, will be received by the building committee at the offices of the President, R. F. Burden, Macon, Ga., on or before 12 o'clock noon October 10, 1911, when they will be opened. Plans and specifications will be on file at the office of the Builders' Exchange, Atlanta, Ga.; Baithmore, Md., or at the office of the Architect, W. L. Stoddart, 20 West 38th St., New York city.

More, Mu, or at the More More, Mu, L. Stoddart, 20 West 38th 8t., New York city.

Proposals shall be accompanied by a certified check for an amount equal to 3 per cent. of the total amount of the bid, as required by the specifications, and the contractor to whom the award is made will be required to furnish surety company's bonds within the time and under the conditions named in the specifications.

The right is reserved to reject any and all bids or any part or parts thereof.

The proposal shall be placed in a plain sealed envelope and addressed "Proposal for Building a Hotel for the Midland City Hotel company, Macon, Ga.," and addressed to the President of the Board of Directors, R. F. Burden, on or before the time set for the bids.

Burden, on or before the time set for the bids.

Blank forms of proposals, drawings and specifications for the exclusive use of the bidders may be obtained only upon written request or telegraph application, accompanied by a cash or draft deposit of fifteen (415) dollars, to the Architect, W. L. Stoddart, 39 W. 38th St., New York. Said draft or deposit to be refunded, less the cost of production, upon return of the drawings and specifications will be forwarded by express immediately upon receipt of deposit required, and bidders are requested to make early application for same.

Plans and specifications for the use of subbidders will be on file as above noted.

R. F. BURDEN,

President Midland City Hotel Company.

Dated at Macon, Ga., September 12, 1911.

See

The Record and Guide, 11 East 24th St.,

The Record and Guide, 11 East 24th St., New York city.

The Manufacturers Record, Baltimore, Md. The American Contractor, Chicago and New York.

(\$300) will be required of each bidder. The right is reserved to reject any or all bids.

W. C. HUDSON, Secretary Drainage District No. 3, Jefferson County.

#### Bids for Street Lighting. Charleston, S. C.

Charleston, S. C.

FROM JUNE 20, 1912, FOR A TERM OF ONE, TWO OR FOUR YEARS.
Sealed proposals will be received at the office of the City Electrician of Charleston, 8. C., until 12 o'clock noon on October 18, 1911, for lighting the streets of the city of Charleston, S. C., for a term of one, two or four years with electricity, gas or some other illuminating power equivalent thereto, or partil by one and partly by another.

The estimate requirements are three hundred (200) are lights of the inclose type, to be supplied with an alternating current of not less than 6.5 amperes under a pressure of not less than seventy (70) voits and the electricity and the electricity and the electricity and the electricial energy of each lamp 475 watts, with an illuminating capacity of 1200 (normal) candle power.

Gas lamps to be of the mantle type, 60 (normal) candle power, and gas to be delivered at a pressure of not less than one and one-half nor more than four inches, and to be of standard commercial quality.

Detail specifications of lighting will be furnished all bidders upon application to the City Electrician.

Lights under this contract to be ready for operation on June 30, 1912.

Certified check for \$350 to accompany each bid, and every bidder must be prepared to turnish a bond satisfactory to the Mayor to the penal amount of \$25,000 conditioned for the performance of his part of the contract, provided his bid is accepted. The city reserves the right to reject any and all bids.

City Electrician,

Charleston, S. C.

Approved:

R. M. MASTERS, Chairman,

Charleston, S. C.

Approved:
R. M. MASTERS, Chairman,
Committee on Lighting the City.

# Proposals for Drainage Con-

Pine Bluff, Ark., Sept. 18th, 1911.

Sealed proposals will be received by the Commissioners of Drainage District No. 3.

Jefferson County, Arkansas, at the office of Bridges & Wooldridge, attorneys, up to 12 o'clock about the construction of a drainage canal in DRAINAGE DISTRICT NO. 3. JEFFERSON COUNTY, ARK.

The main items of the work will consist of approximately—

Signifies of main canal,

265,000 cubic yards of excavation.

Maps, profiles and specifications may be obtained upon application at the office of White & Watson, engineers, Pine Bluff, Ark.

A certified check of three hundred dollars (\$300) will be required of each bidder.

The right is reserved to reject any or all bids.

W. C. HUDSON.

# A Billion Dollars

were received by the South from Sept. 1, 1910 to Aug. 31st, 1911 for cotton alone. This year's cotton crop will bring the South at least another billion, and cotton represents only one-third of the value of the South's agricultural products. This means the South will be a big buyer of machinery and supplies of all kinds; that it will build more hotels and office buildings and fine dwellings; that it will build more good roads and do more municipal work than ever before. Do you want to increase your trade with such a rapidly growing section? The proven way of doing this is through the advertising columns of the Manufacturers Record.



# Special Advertisements of General Interest.

# "TIMBER TO BURN"

We have on our list some of the biggest bargains in tracts of timber, both soft and rd woods, that it has been our pleasure to offer the public, and intended buyers will do it to get our list.

We also have several coal properties for sale.

BELLER & WILSON

Headquarters for Timber and Coal. 402-404 Nat. Exchange Bank Bidg., ROANOKE, VA.

### An Up-to-date Wood Working and Saw Mill Plant for Sale

Complete in every particular. Covering 21/2 acres of land in the center of Norfolk, now doing a business of over \$100,000 per year. For sale cheap. Details furnished on application.

ABBOTT MORRIS & CO.

NORFOLK, VA

# Unusual Bargain in a Cotton Mill

The Plant of ELIZABETH COTTON MILLS, located near Atlanta, Ga., is to be sold by October 3d next

Plant is completely equipped for making Fancy Dobby Weaves, producing about 40,000 pounds of Cloth and 10,000 pounds of 50's and 40's Hosiery Yarn Monthly.

The mill as now equipped contains 10,500 Spindles and 251 36" and 40" Looms, all equipped with 16 and 20 Harness Dobbies.

Buildings are of standard construction and contain complete MOIST-ENING, HEATING, LIGHTING and SPRINKLER SYSTEM of modern design, with sufficient space, power and preparatory machinery for an additional 4500 Spindles. The VILLAGE consists of 48 Operative Houses, Warehouses, Church, Office and GINNERY, located on the 36 acres of land. This PROPERTY recently appraised by a competent Mill Engineer at \$178,000, exclusive of value of land.

Private sale of above property can be arranged prior to October 3d. FOR INFORMATION ADDRESS

F. W. STONE, Trustee,

ATLANTA, GA.

# Notice of Public Sale by the Trustee of the Property of the

# **GEORGIA COTTON MILLS**

of Dublin, Laurens County, Georgia

Notice is hereby given that the undersigned Trustee, under that certain Mortgage Deed of Trust executed by the Georgia Cotton Mills, a corporation of Dublin, Laurens county, Georgia, on the first day of March. 1909, recorded in the office of the Clerk of the Superior Court of the said county of Laurens in Book 54, pages 19 et seq., to secure the issue of bonds therein mentioned, and also as Trustee under that certain other Mortgage Deed of Trust executed by the said Georgia Cotton Mills on the first day of Cotober, 1910, recorded in said Clerk's office in Book 58, pages 510 et seq., to secure the issue of bonds therein mentioned, defaults having occurred under the provisions of both mortgages, will sell at public outcry, to the highest and best bidder, and in accordance with the terms and provisions of the said Mortgage Deeds of Trust, at Dublin, Laurens county, Georgia, before the County Courthouse door, between the legal hours of sale, on the first Tuesday in December next, to wit, on Tuesday, December 4, 1911, all the property described in the said two Mortgage Deeds of Trust and mortgaged or intended to be mortgaged thereby, to wit:

That tract of land containing sixty-three and sixty-five hundredtis (63.65) acres, more or less, situated in said county of Laurens, State of Georgia, in the three hundred and forty-second (342) district G. M., and being a part of lot of land number one hundred and sixty-four (164), and described in a plat recorded with a deed from W. W. Robinson to the Dublin Cotton Mills, dated November 29, 1899, in the office of the Clerk of the Superior Court of Laurens County in Book 8 of Deeds, folios 54 and 55; also that tract lying in the First Land District of Laurens county, Georgia, known as the Robinson Mill Place or Lot, containing twelve (12) acres, more or less, being in the First Land District of said Laurens county. The cotton-mill buildings and machinery of the said Georgia Cotton Mills being located on said property.

Also, all the entire textile machinery of every character

wo mortgages.
Terms cash. Purchaser paying for title.
This August 28, 1911.

THE CITIZENS' AND SOUTHERN BANK.
By M. B. Lane, President ADAMS & ADAMS, Attorneys for Trustee, Savannah, Ga.

Trustee, Savannah, Georgia.

# Choice Factory Sites

In Canton, the Industrial Suburb of Baltimore

Many different industries are thriving in Canton, but we can still offer a number of favorable sites, both water from and inland.

The B. & O. and the Pennsylvania Railroads run right through the property. Transportation facilities all that could be wanted. Raw material for almost any kind of industry easily obtained. The Southern market near at hand.

We want to hear from newly formed manufacturing concerns as well as from existing plants that contemplate moving or establishing a branch plant.

Detailed information gladly and promptly given.

### **CLOUD & CLARK**

State Bank of Maryland Building

BALTIMORE, MD.

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# AN OPPORTUNITY!

A 20-ton Ice Plant, bottling works and coal business in one of the best county seats of Northeast Oklahoma, serving a large surrounding territory. No competitors. Best artesian water, excellent location on railroad. Good buildings and equipment.

Paying better than 20% on investment on unsolicited business. Valid reason for selling. A hustler can double the income. \$32,000 will handle; half terms if desired.

RARE OPPORTUNITY. No trouble to answer questions if you are interested.

M. C. HARPER

MIAMI

OKLAHOMA

# GEORGIA FARM LAND FOR SALE

About 10,000 acres fertile farm land within 38 miles of Savannah, Georgia; healthy location and good water, suitable for colonization. A good stand of yellow pine timber, estimated at 20,000,000 feet and thousands of cords of wood. Located for seven miles on two main line railroads, giving low freight rates, secured by water transportation competition, to Northern markets, with all-year markets close at hand. Will not divide tract. Will sell outright or put in property and take interest with financially able developing company.

W. W. ROBERTSON, Owner

NORFOLK, VA

# Narrow Fabric Mill Complete Saw Mill Plant, Dry Kiln

FOR SALE

With 14 looms and all the necessary machinery for the manufacture of elastic garter and suspender web ing. There is space for double the number of looms. Good water privilege, with new water wheel, tenement property, boarding house and 39 acres of land.

For details and price, address

A. M. KUHN, Easthampton, Mass.

### WANTED

Location for Silk Mill

Silk Mill.—An old-established firm wishes to start a branch mill in the Middle South where plenty of good labor and cheap power can be obtained. Would employ 300 or more. Give full particulars in reply. Address Silk Co., care Manufacturers Record.

# Stone Quarry & Crushing Plant

FOR SALE

Location, Wake county, North Carolina.
Steady demand for entire output at good
prices. No other quarry in this section.
Capacity, 300 tons crushed stone per day.
Will sell cheap.

AMERICAN STONE CO.,
P. O. Box 538, Richmond, Va.

# and Logging Equipment

FOR SALE

Mill has a dally capacity of 25,000 feet. Logging outfit consists of Locomotive, three and one-half miles of tramroad and six log trucks. Eighteen to twenty million feet of choice Pine timber, well blocked. Mill located about 35 miles south of Savannah, on the Seaboard Air Line Railway. Fifteen to twenty million feet additional timber can be had in easy reach of this plant. For full particulars address

ALBERT FENDIG & CO., Brunswick, Ga.

# WATER-FRONT PROPERTY IN VIRGINIA

Suitable for factory development or private investment. 73½ acres high land, 6½ acres open water with a fine water-frontage of 1426 feet on Deep Creek near Gilmerton, close to Navy-Yard and not far from City of Portamouth.

This excellent water-front property will become very valuable in the near future. At present there are railroad facilities within 500 yards. Will sell to quick purchaser for \$150.00 per acre.

Will sell to quick purchaser for \$150.00 per acre.

S. L. NUSBAUM & CO.

Suite 600 Citizens' Bank Bidg., Norfolk, Vs.

# NOTICE On the Map

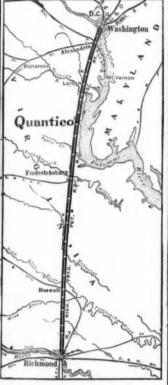
that Quantico is on main line between

# Washington

Richmond

conecting with the B. & O. and Pennsylvania on the North and main Southern lines on the South, affording rail facilities to any part of the country; also on Potomac River with deep

water transportation.



# **FINE** Industrial Sites

at Quantico, Va.

A

ln

Large deposits high-grade clay — good chance for brick and clay industries. All kinds of wood, offering handle works, chair factories and woodwork-ing plants generally a fine op-portunity. Favorable locations for knitting mills also.

Plenty cheap labor and no local taxation.

New manufacturing district.

Details gladly furnished by

H. B. HUTCHISON Colorado Bldg., WASHINGTON, D. C.

The Hardwood Timber, consisting of Ash, Hickory, Gum, Elm and Hackberry, on 16,000 acres of land; splendid shipping facilities, railroad passing through the land.

A good handle and slack stave

Timber must be moved in order to clear land.

For particulars write

Mann Land & Improvement Co. TEXARKANA, ARK.-TEX.

# Wanted to Buy

One steel drawbridge, complete: 199-ft.
ans: total length 225 ft.; capable of carryg two 100-ton locomotives coupled together
awing train weighing three tons per linear
ot. Also shell for one concrete pier 30 ft.
diam., 60 ft. high. Also shells for four
nerrete piers 6 ft. in diam., 60 feet high.
ldress

FERNWOOD LUMBER CO., Fernwood, Miss.

# Sash, Door and Blind Factory

FOR SALE

Machinery, tools, fixtures and good-will of a factory making sash, blinds, doors and other building material in one of the largest and most progressive cities in the South. It is one of the best equipped factories in the South and has an established reputation for high-grade work. For further information address Manufacturer, care Carrier No. 1, Richmond, Va.

# PANTS FACTORY AND WOOLEN MILL

Both under same roof; water-power; on railroad, within 12 miles of Atlanta, Ga.; fine climate; plenty of water; good help; good trade built up for output; good, safe neney to right party; owner too busy with other business to give it proper attention. Address "X, Y.," care of Manufacturers Record, Baltimore, Md.



Our daily life is largely directed by habits.

Develop the habit of mentioning the MANUFACTURERS RECORD

when writing to advertisers. It only adds a few words, and is the easiest way to "get started" on a

# Hardwood Timber BY J. E. CONANT & CO. . . . Auctioneers

OFFICE, LOWELL, MASSACHUSETTS

### RARE OFFERING OF MANUFACTURING PROPERTY.

In one lot:—New building, 371x86 ft., two stories, of reinforced concrete and steel fire proof construction; new Hercules 175 H. P. water-power plant, capable of 75% Increase new Harris Corliss 650 H. P. steam-power plant; new Stewart 675 H. P. boiler plant; new General Electric lighting plant, 1600 lights; new Holyoke No. I rotary fire pump; excellen brick building, 197x50 ft., 3½ stories and basement, recently extended 50 ft., overhauled and renewed.

### 812 LOTS OF MACHINERY

## Most Exceptional and Modern Village Renting Properties

Forty-one parcels of investment real estate, one-half new, city style, slated roof, ha wood finish; two, three and four-family houses with modern conveniences; one-half balance splendid village property, and the remainder mill houses. The properties of ROCHDALE WOOLEN MILLS at Rochdale (near Worcester), Massachusetts, upon wh several hundred thousand dollars have been expended since 1806, are pledged to the high bona-fide bidders at absolute auction sale. Hiustrated and descriptive catalogue in greatful upon application at the office of the auctioneers, where all inquiries must be ma The sale will take place upon the premises regardless of any condition of the weather Wednesday, the 4th day, and Thursday, the 5th day of October, 1911, promptly at half-pten o'clock each forenoon.

# Best Land and Mineral Investment Ever Offered

I must sell at once the tract of land abounding in minerals, timber and excellent farming lands, described as follows:

1500 acres in Cherokee County, Ga., on Etowah River, 50 miles north of Atlanta. 200 acres of this is in rich river bottom, worth \$200 per acre; balance of the tract in virgin timber. Lays fine for farming. All timber land would sell in 100-acre farms at \$40 to \$50 per acre. L. & N. R. R. and public roads run through it. Considered among the MOST VALUABLE IRON ORE LANDS IN GEORGIA; also good MARBLE taken FROM THIS LAND. OWNER VERY OLD, and must SELL QUICK to make DIVISION to HEIRS. MINERAL WORTH SEVERAL TIMES THE SACRIFICE PRICE, \$45,000.

F. MARION THOMASON, 405 Gould Bldg., ATLANTA, GA.



# BARGAINS IN MACHINERY AND SUPPLIES.

## WRIGHT ENGINE

FOR SALE

22x42. right hand; flywheel 16 ft. diameter, 30-in. face; in good order; can be seen run-ning any time.

PHILADELPHIA STEEL & FORGE CO., Works at Tacony, Pa. New York Office, 50 Church St.

# Boiler, Engine and Pump

Having installed electric power, we offer at a sacrifice price one 60 H. P. boiler, one 50 H. P. Atlas engine, one Cameron pump, with all connections, ready to set up and run. All in good shape. Price \$300 for the entire outfit.

MUTUAL MILLING & SUPPLY CO., Harrisonburg, Va.

### A Bargain in Brick Machinery

Having decided to install dry-press machinery, we are offering a most complete outfit of J. C. Steele & Sons No. 3 equipment for making end-cut stiff-mud brick, together with boiler and engine. All is practically new and in first-class running condition, and is a real bargain to anyone who is going into the brick business. For further information address

KENBRIDGE BRICK WORKS. Kenbridge, Va.

#### Machinery and Contractors Supplies

Duplex and Jet Pumps, Bollers and Re-ceivers, Lathes. Cranes, Punches and Shears, Rolls, Steam Belt or Gas Driven Electric Generators, Searchlights, Buckets, Norden Safety Hooks.

BALTIMORE METAL MACH. & SUP. CO., 903 Bromo-Seltser Tower Bidg., Baltimore, Md.

# Bargains in Machinery and Supplies.

### DYNAMOS AND MOTORS

I buy, sell, rent and exchange. The best and the cheapest. sale and what you want to buy.

THOMAS YEARSLEY
211 N. 3rd St. Philadelphia, Pa.



16th and Lincoln Sts., CHICAGO.

We have the largest stock of second-hand electrical machinery in the world. Send for our "monthly Bargain sheet," showing complete stock with net prices. We can save you fully one-third. All machines completely overhauled, tested and shipped practically "as good as new."

#### PLANERS

1 84"x84"x20" "Sellers," two heads on cross

rall.

1 42½"x40"x15" "New Haven," one head on cross rall.

cross rail.

Both worm drive, in good condition.

We also have a full line of smaller Planers
in stock. Send us your inquiries.

L. F. SEYFERT'S SONS, INC., 437-441 North 3d St., Philadelphia.

#### Engines, Boilers, Generators, etc.

2 30x48 Corliss Engines. 2 24x48 Corliss Engines. 1 22x32 Buckeye Engine. 2 Phoenix Tandem 12 and 20x16 Engines. 1 Allis Corliss Tandem, 22 and 24x48 Engine. Engines direct connected to generators. SEND for list and prices.

THE DORNER RAILWAY EQUIPMENT CO. 332 S. Michigan Ave., Chicago.

### ELECTRICAL EQUIPMENT

Direct-Connected Lighting Sets. 110-125 volts. 9 K. W. Crocker-Wheeler, with Case Engine. 15 K. W. General Electric, with Ideal Engine. 100 K. W. General Electric, with Bull Engine. 10-25-50-100 K. W. 110-125-volt Belted Generators.

K. W. Thresher, 110-125-volt Belted Unit. 0-75-100 K. W. 220-250-volt Belted Genera

30-50-75-100 K. W. Zarzerton total.

tors.

5-10-20-25-30-50-70 H. P. 220-volt Motors.

150 and 300 K. W. Belted Alternators, 2 and 3 phase, 25 and 60 cycles.

Alternating Current Motors, all sizes, cycles and voltages.

Electrical machinery of all kinds purchased. Send list of what you have.

Write for list and prices.

DANIEL KILLION, 211 N. Third St., Philadelphia, Pa.

# "220 VOLT" WESTINGHOUSE Alternating Current Motors **MOTORS**

Just Purchased

Just Purchased

13-10-H. P. D.-C. Motors, speed, 1325.
Condition like new. Complete equipment.
Also "Spare Parts" 1-Extra Armature. 1Set Shunt Field Coils. 3-New Commutators.
Low Prices, Factory Guarantee.
MANY OTHER BARGAINS. SEND FOR
LIST.
Special attention to repairs, installations and reconstruction of Electrical apparatus.

MILLER-OWEN ELEC. CO. 217-219 First Ave. Pittsburgh, Pa.

#### FOR SALE

One 26"X4" Lathe. One 20"X10" Lathe. One 18"X8" Lathe. One 14"X6" Lathe. One 30 H. P. Traction Engine. One No. 2 B. Koehring Cement Mixer. One No. 1 Smith Mixer, with gasoline engine. One No. 1 Smith Mixer, with boller and engine. Two 125 H. P. Hor. Tub. Boilers. Two 110 H. P. Hor. Tub. Boilers. Two 10 H. P. Hor. Tub. Soilers. Two 110 H. P. Hor. Tub. Soilers. Change Mixer and Matchers, 4"X5". One Missispipi Planer and Matcher, 4"X14". CHAS. T. LEHMAN, Birminghan, Als.

### ENGINES AND CONTRACTORS' EQUIPMENT FOR SALE

Three pairs twin Corliss engines, cylinders 20 by 42. Will sell at sacrifice. Guaranteed in first-class condition and can be delivered immediately. Can be separated if desired.

Also the following -87 Ellison 4-yard dump cars, 36 gauge; 75 tons relay rails, 45 and 60 pounds 1 Mundy 7 by 10 D. C. and D. D. hoisting engine. Cheap to quick buyer. Address

BOSTON IRON & METAL CO., BALTIMORE, MD.

# DYNAMOS and MOTORS

# Direct Connected Units **Belled Generators** Direct Current Motors 300 OF THEM

Thoroughly overhauled and fully guaranteed.

In stock for immediate delivery.

We Buy, Sell, Repair, Rent or Exchange.

## E. LEVENE & CO.

124 N. 3rd, St., Philadelphia

### RAILS FOR SALE

20, 30, 40, 56 and 60-pound Relayers. 8 miles 35-pound Relayers. 25 miles 50-pound Relayers. Locomotives, Log Cars, Spikes, Bolts, Frogs nd Switches. Address

NATIONAL IRON & STEEL COMPANY, 1516-1517-1518 Carter Bldg., Houston, Texas.

#### 30-Ton Triumph System Ice Plant For Sale

Complete and in shipshape. Installed in reinforced concrete building and near the heart of the city of Sweetwater, Texas, the best and fastest-growing city in Texas west of Fort Worth. Six thousand people now. Three trunk-line railroads. Shops and general division of the Santa Fe cut-off from Galveston to the Pacific Coast. Negotiating now for Icing contract with Santa Fe. Interested in an ice plant that will make money? Better investigate this. We want to give our attention to water-works improvement only. No other plant here. Address BEN ANTHONY, Sweetwater, Texas.

# **Creosoting Cylinder for Sale**

For a customer a new creosoting cylinder seventy-two inches in diameter by eighty feet long, built for one hundred and twenty-five pounds pressure. Can be sold at a low price.

The Walsh & Weidner Boiler Co. CHATTANOOGA. TENN.

# FOR SALE

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All sizes, 1/8 inch to 24 inches Furnished with new threads and couplings, suitable for all practical purposes; large stock constantly on hand, together with a general assortment of used contractors machinery.

# MARINE METAL & SUPPLY CO.

## SECOND-HAND SAW MILL MACHINERY

We have at Woodbine, W. Va., the follow-ing, which we wish to sell, and will dispose of same at a low price:

of same at a low price;
One 7' Clark Band Mill in good condition.
One Clark Three-block Carriage, opens 40."
One 8" Clark Steam Feed.
One 3' Clark Steam Feed.
One 3' Climax Engine, 18-ton.
Twelve 3' gauge 8-wheel Lumber Trucks.
One Stationary Engine, 20 horse-power.
If you can use any of the above, please write

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# Heavy Circular Saw Mill Machinery FOR SALE

One heavy circular-saw mill, complets; endless chain log jack, live rolls, twin eaglnes, boilers, pulleys and shafting; 198 H. P.; been used.

Also, one heavy circular mill without bollers; twin engines, 200 H. P.

One Wickes gang No. 5.

The above mill and gang never used. The mills will be sold as a whole or in part.

Also, two (2) Flory skidders, 30 H. P. and one 55 H. P.; been used, but in good workling order.

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One 24"x8" Five-Step Cone-Head q. c. g. Lodge & Shipley Engine Lathe. One 354"x60" Fitchburg Lo-Swing Lathes. One No. 3 Lodge & Shipley Rapid Reduction Lathe with 8" bed.

PLANERS
One 36"x36"x10" Three-Head Sellers.
One 36"x36"x26" Four-Head Sellers.
One 42"x42"x20" Single-Head Putnam.

MISCELLANEOUS

MISCELLANEOUS
One Whiton Revolving Centering Machine.
One Franklin Cold Saw, 3½" capacity.
Two No. 3 Nuter-Barnes Cold Saws, 6" capacity.
One Schuster ½" Riveter, Model "A."
One Mumford 12"240" Power Ramming Molding Machine.
One Globe Power Hack Saw, 8" capacity.
One Universal Power Hack Saw, 6" capacity.

THE LODGE & SHIPLEY MACHINE TOOL CO.

Cincinnati, Ohio, U. S. A.

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1 18x36 Bates.
1 16x42 Alilis.
1 16x42 Brown.
1 18x42 Lane & Bodley.
1 20x48 Wetherill.
1 22x48 Hamilton.
1 24x42 Atlas.
1 28x54 Hamilton.
Automatic Engines of all sizes.
1 40-ton Corliss Engine Type De La Vergne Ice Machine.
1 to Brewery Tanks.

1 60-ton Corliss Engine Type De La Ver Ice Machine. 1 lot Brewery Tanks. Woodworking Machinery of all kinds. Belting, Shafting, Pulleys and Hangers.

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Built by Filer & Stowell. Complete planing mill, capacity 75,000 feet. All parts is good working order. Will give same service as new. Price \$3000. An inspection will prove this a rare bargain.

J. B. WATKINS, Lake Charles, La.

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SECOND-HAND

# Machine Tools

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10x44 Lodge & Davis, chucks fitted.

11x4 Mann, R. & F.

14x6 Davis, plain rest.

14x8 Le Blond, plain rest, chuck, P. C. F.

16x6 Reed, compound rest, P. C. F.

16x8 Fay & Scott, plain rest, P. C. F.

16x8 Lodge & Shipley, patent head chuck.

20x8 McMahon, compound rest, chuck.

20x8 McMahon, compound rest, P. C. F.

21x14 Reed, high speed.

27x12 Pratt & Whitney, C. R., P. C. F.

28x10 Putnam, C. R., P. C. F.

28x10 Gleason, compound rest, taper.

30x12 Pond, C. R., P. C. F.

22x17 Bement-Miles, C. R., triple geared.

38x16 Reed, compound rest, P. C. F.

40x18 Newark, triple geared, C. R., P. C. F.

40x18 Fitchburg, T. G., C. R., P. C. F.

21x14 Powell, compound rest, T. G.

21x14 Powell, compound rest, P. C. F.

26x13 Fitchburg, compound rest, P. C. F.

SCREW MACHINES. SCREW MACHINES.

2026 Bardner & Oliver, friction head.
No. 2 %" Warner & Swasey, wire feed.
No. 16 Garvin, wire feed, friction head.
No. 1 Garvin, wire feed, friction head.
No. 1 Garvin, wire feed.
%" National Acme, automatic.
No. 6 Brown & Sharpe, friction head.
1" Smurr & Kamen, wire feed.
%", %", 1" and 2%" Pratt & Whitney automatics.
No. 3 2" Pratt & Whitney, wire feed.
No. 2 %" Pratt & Whitney, wire feed.
No. 17-16" Pratt & Whitney, wire feed.
MILLERS.

MILLERS.

No. 2 Cincinnati, plain.

No. 4 Cincinnati, plain, back gears.

No. 2 Le Blonde, plain, back gears.

No. 2 Part & Whitney, Lincoln pattern.

No. 24 Brainerd, plain, back gears.

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20" Prentice Bros., power feed.
15" Slate, sensitive.
4 Bickford, plain radial.
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10-spindie Gardam, adjustable.
40" New Haven, sliding head, back gears.
25" Gang, plair radial.
7-spindie Slate, bedstead.

SHAPERS.

" Gould & Eberhardt, crank." and 20" Hendey, friction.
" Lodge & Davis, crank." Cincinnati, geared.

MISCELLANEOUS.

MISCELLANEOUS.

Boring Mill, 37" Bullard, 2 heads.
Grinder, Sellers, universal tool.
Planer, 36x36x8 Betts, 1 head.
Planer, 36x36x8 Betts, 1 head.
Planer, 36x36x12 Betts, 4 heads.
Planer, 48x46x18 Fond, 3 heads.
Planer, 48x46x18 Fond, 3 heads.
Boring Mill, 10' Fond.
Grinder, Walker, electric surface.
Grinder, Walker, electric surface.
Grinder, No. 2½ Bath, universal.
Gas Engine, 8 H. P. Fairbanks.
Hammer, 50 lbs., Bradley, compact.
Hammer, 1000 lbs., Pratt & Whitney, drop.
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Grinder, 12x42 Landls, universal.
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Slotter, 16", Bement, motor driven.
Keyseater, No. 2 Davis.
Brake, 8' Niagara.
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8½"x12 7"x10" 7"x10" 7"x8" bas 6¼"x10 6¼"x10 6¼"x10

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28"x48" 24"-44" 22"x42' 20"x30' 16"x36' 2 14"x3 14"x20' 12"x24' Larg and pla

24"x24" cu. 22"x221 Lin 10"x10" dri Large DIRE

525 K. con lock 135 K. con Cor 50 K. V dire hou

200 K. belt Large

1 13"'x2:
200
1 12"-20
160
1 11"-19
H.
2 10"-18
H.
Large

36"x16"
26"x14"
24"x10"
22"x16"
20"x10"
20"x10"
20"x16"
20"x12"
16"x8" |
15"x8" (
12"x6" |
Two 17"

No. 3 head No. 2½ tabl No. 2 C new About 2 26" Gou 20"x30" 20" Step 20" Smi

8lx No. Two No PG-5 Fe No. 63 I 48" Gan 42" Hill 36" Gou tape 36" Plai

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BOILERS.
1 150 H. P. Manning Vertical Tubular, 125 ibs.

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steam.

66"218" Horizontal Return Tunular, 125 H.
P., 125 lbs. steam.

198 H. P. Heline Water-Tube, 125 lbs. steam.

198 H. P. Economic, 100 lbs. steam.

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26"220" Horizontal Return Tunular, 125 H.
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Large stock of return tunular and vertical types, all sizes.

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24"x24"x30" Rand Single Straight Line, 1300 cu. ft.

cu. ft.
27/224" Ingersoll-Sargeant Straight
Line, Class A, 975 cu. ft.
67/210" 10" Cox & Sons Duplex, 275-350 cu. ft.
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12"x8' Hendey Toolroom Lathes, with collets.
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No. 2 Cincinnati Universal Milling Machine,
complete, with vertical attachment, like

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One 80 H. P. Roberts Water-Tube Boller. One 25 H. P. Erie Engine, complete, with gov

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60x14, 54x14, 48x14, 44x14, 44x12, 42x12, 36x16, etc.

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40"x8 Newark "Binze" Horz. Boring Mill.
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No. 2 Brown & Sharpe Universal Milling Machine.

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No. 1 Brown & Sharpe Universal Milling Machine.
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1 No. 11 "Municipal," engine and boiler., 525
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250 Volts.

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One 9xi0x12 Straight-Line Steam-Driven
Compressor, cap. 174 cu. ft., in first-class condition, complete, with speed and pressure
governor, at a bargain, as we are replacing
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One McEwen Center-Crank Engine, 13x14, normal 100 H. P. This engine is in the very best of condition and is for immediate delivery. Will sell at less than real value to quick buyer.

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500 tons 70-lb. 500 tons 65-lb.

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Largest Stock Locomotives in United States

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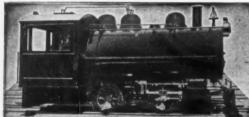
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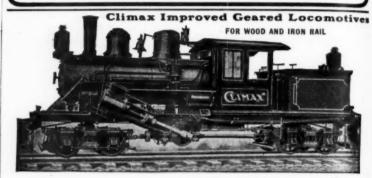


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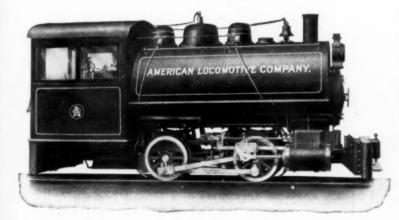
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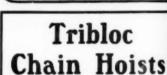
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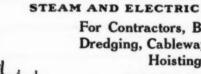
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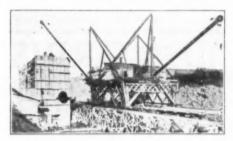
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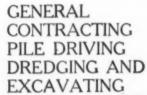
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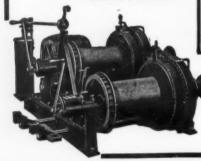


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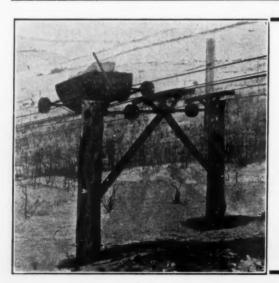


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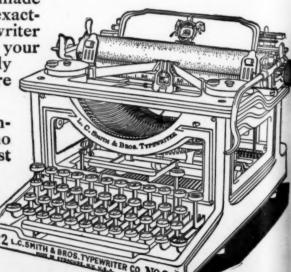
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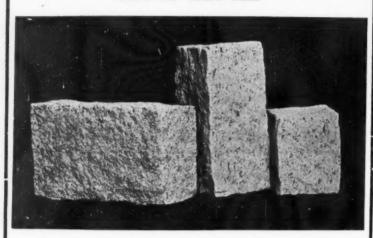
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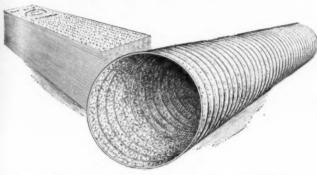
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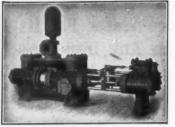
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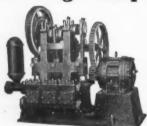
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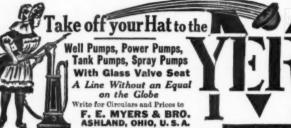


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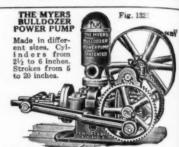
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This pump has liberal valve area, and as the flow of the water is in one direction the frictional resistance is reduced, and the accumulation of sediment over the valves is prevented.

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(HYDRAULICALLY BALANCED)

Prevents rapid wear at the revolving joint, where the impeller enters the suction opening. This pump is a marked improvement over the enclosed-impeller type.

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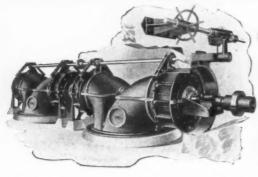
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Many plants owe their constant operation and low maintenance cost to the substantial construction of our machinery.

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For Irrigation, Tanneries, Mine Drainage, Phosphate Mining, Circulating Water for Condensers, &c., &c.



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SPRINGS OF Flat, Round and Square

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# CHAPTER NO. 6

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# **SPECIALTIES**

Our Dogging Devices:-

Individual preference is a matter that must be taken into consideration in fitting a Mill with Dogging Devices, and we therefore make a large and varied line of these attachments.

Our Screw Dog is a part of the regular equipment of most of our small and medium sized mills, and is a very popular Dog. The hand Dog can be raised and lowered on the screw by pressing a latch, thus giving it much the action of an ordinary Post Dog when desired, and the teeth can be forced into a log very powerfully by means of the screw.

Our Green Mountain Dog is regularly supplied with all our larger Mills, and for heavy work is the best Dog yet invented. It will hold a round log or a plank or board perfectly, and dogging or undogging is effected by the throw of a single lever, so arranged that a bammer blow can be given after the teeth have been first set into the log. We build this Dog in several sizes, and it can be had as an extra with all but the very smallest of our mills.

Not the least advantage of our method of construction is that the outfit of Dogging Devices can be changed at any time, should the character of the work or the wishes of the operator make this desirable, as our Dogs are not attached directly to the horizontal headblocks, as in the so-called "Western" type of Carriage.

In addition to Last-board Dogs and Post Dogs and the two Dogs above described, we also build several special types which we cannot properly describe in this limited space. Among these are the Brown Dog, the Lane-Brown Dog, and the Sawyer's Favorite Dog. This last is our newest introduction and has sold in great numbers for several years. It is probably the most popular Dog made for small and medium sized mills.

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LANE MANUFACTURING Co.

Montpelier, Vt.

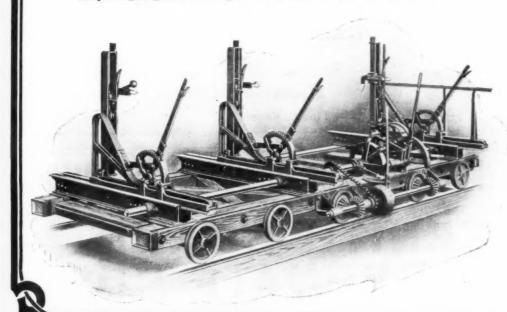
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We know just what a first-class mill needs, for we have been studying Saw Mill requirements, and successfully designing and building Saw Mill Machinery, for many years.



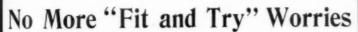
Our size "W" Mill shown herewith. Designed for heavy duty. Very accurate. Very substantially constructed.

Let us acquaint you with the Knight Line.

Questions promptly answered and interesting illustrated catalogue sent on application to Dept. 1815.

# **KNIGHT**

Manufacturing Co. CANTON, OHIO





AFTER YOU ONCE ADOPT

# The Shimer Cutter Head

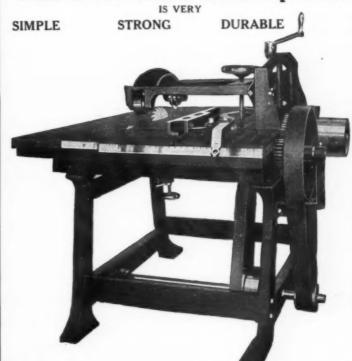
The cutters are securely held upon Conical Duplex Bit Seats to give the leading points effectual clearance in cutting down square offsets and working out irregular designs, the pattern for which is permanently shaped within the Bit contours. These features, in connection with the divisional bit series, is serving to introduce The Shimer Cutter Head into the mills of the country.

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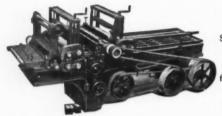
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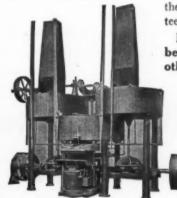


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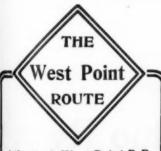
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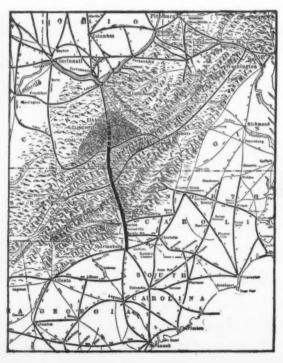
With the completion of a short stretch of track at its northern end the Clinchfield will become the main highway for passenger and freight traffic between the Central West and the Piedmont section of the South.

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Cupola Furnaces.
Northern Engineering Works, Detroit, Mich.
Parson Co., J. W., Philadelphia, Pa.
Petroleum Iron Works Co., Sharon, Pa.

Cuts. (Half-tone, Line, etc.)
Baltimore Maryland Envg. Co., Baltimore, Md. Cutter Heads. (Woodworking.) himer & Sons, Samuel J., Milton, Pa.

Cutter Grinders.

Abrasive Material Co., Philadelphia, Pa.
Vitrified Wheel Co., Weatfield, Mass.

Dams. (Reinforced Concrete.) mbursen Hydraulic Const. Co., Boston, Mass.

Derricks and Derrick Fittings. American Hoist & Derrick Fittings.

Monighan Machine Co., Chicago, Ill.

National Hoisting Engine Co., Harrison, N. J. Designers and Illustrators. (Printed Matter.) altimore Maryland Envg. Co., Baltimore, Md.

Die Makers. (Special.) lack & Decker Mfg. Co., Baltimore, Md.

Black & Decker Mfg. Co., Baltimore, and.

Ditching Machinery.

American Holst & Derrick Co., St. Paul, Minn.

American Econotive Co., New York, N. Y.

American Steel Dredge Co., Ft. Wayne, Ind.

Browning Mfg. Co., Mansfield. O.

Fairbanks Steam Shovel Co., Marion, O.

Hayward Co., The, New York, N. Y.

Marlon Steam Shovel Co., Marion, O.

Monighan Machine Co., Chicago, Ill.

Owen Bucket Co., Cleveland, O.

Williams Co., The G. H., Cleveland, O.

Docks. (Concrete.) arolina Portland Cement Co., Charleston, S. C. Doors. (Birch Veneered.) assee & Felton Lumber Co., Macon, Ga.

Doors. (Steel Rolling.) Innear Mfg. Co., Columbu

Doors. (Tin Clad.) ictor Mfg. Co., Newbu

Doors, Partitions. (Metallic.)
Dahlstrom Metallic Door Co., Jamestown, N. Y.
United States Metal Products Co., New York, N. Y.

Doors, Sash and Blinds. umbus Iron Works Co., Columbus, Ga. ssee & Felton Lumber Co., Macon, Ga.

Draftsmen's Supplies. euffel & Esser, Hoboken, N. J. 'eber & Co., F., Philadelphia, Pa

Dredge Chains. climer Chain & Iron Co., Lebanon, Pa.

Dredges. [See Excavating Machinery.] Drills. (Pueumatic.) [See also Drills, Rock and Mining.]

Drills. (Prospecting.)
Fort Wayne Electric Works, Fort Wayne, Ind.
Ingersoil-Rand Co., New York, N. Y.
Keystone Steam Well Mach. Co., Beaver Falls, Pa.
McKlernan-Terry Drill Co., New York, N. Y.

McKlernan-Terry Drill Co., New York, N. Y. Drills. (Rock and Mining.)
Chicago Pneumatic Tool Co., Chicago, 111.
Fort Wayne Electric Works, Fort Wayne, Ind., Independent Pneumatic Tool Co., Chicago, 111.
Ingersoil-Rand Co., New York, N. Y.
Jeffrey Mfg. Co., Columbus, O.
McKlernan-Terry Drill Co., New York, N. Y. Drills. (Twist.)

Manning, Maxwell & Moore, Inc., New York, N. Y. Morse Twist Drill & Meh. Co., New Bedford, Mass. Drive Well Points and Well Supplies.

Drop Forgings. American Spiral Pipe Works, Chicago, Ill. Great Southern Automobile Co., Birmingham, Ala. Richmond Forgings Corporation, Richmond, Va.

Drop Forging Machinery, ss Co., E. W., Brooklyn, N. Y.

Drying Machinery.

Drying Machinery.

merican Blower Co., Detroit, Mich.
merican Process Co., New York, N. Y.
atley-Lebby Co., The, Charleston, S. C.
ufialo Forge Co., Buffalo, N. Y.
uggles-Coles Engineering Co., New York, N. Y.
urrewant Co., B. F., Hyde Fark, Mass.

Drykilns. Dryklins.
Buffalo Forge Co., Buffalo, N. Y.
Hollister-Whitney Co., Quincy, 111.
Sturtevant Co., B. F., Hyde Park, Mass.
Union Iron Works Co., Selma, Ala.

Dumbwaiters. Sidney Elevator & Mfg. Co., Sidney, O. Speidel, J. G., Reading, Pa. Dump Wagons and Wagon Boxes.
Case Threshing Mach. Co., J. I., Racine, Wis.
Eagle Wagon Works, Auburn, N. Y.
Troy Wagon Works Co., Troy, O.

Dust-Collecting Systems.

Buffalo Forge Co., Buffalo, N. Y.
Savannah Blow Plpe Co., Savannah, Ga.
Skinner Bros., St. Louis, Mo.
Smith Roofing Co., Wilmington, N. C.
Standard Blower & Metal Míg. Co., Atlanta, Ga. Dynamite.

du Pont-de Nemours Powder Co., E. I., Wilmington, Del.

Dynamos and Motors. (Steam Turbine.) Dynamos and Motors. (Steam Turbine.)
De Laval Steam Turbine Co., Trentoa, N. J.
Emerson Steam Pump Co., Alexandria, Va.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Sciencetady, N. Y.
Southwark Fdry. & Mch. Co., Philadelphia, Pa.
Terry Steam Turbine Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Western Electric Co., New York, N. Y.
Westinghouse Elec. & Mfg. Co., Pittaburg, Pa.

Eaves. (Trough.) Edwards Mfg. Co., Cincinnati, O. Hussey & Co., C. G., Pittsburg, Ps. Milwaukee Corrugating Co., Milwaukee, Wis. Ejectors. (Automatic Sewage.)

Blaisdell Machinery Co., Bradford, Pa.

Electric Machinery. (Dynamos, Generators, Motors, etc.)

Motors, etc.)

Allis-Chalmers Co., Milwaukee, Wis.
American Engine Co., Bound Brook, N. J.
American Engine Co., Bound Brook, N. J.
American Mechine Co.
Concer-Wheeler Co., Ampure, N. J.
Doubleday-Hill Electric Co., Pittsburg, Pa.
Engherg's Elect. & Mech. Works, St. Joseph, Mo.
Fairbanks, Morae & Co., Chicago, Hi.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Belenctady, N. Y.
General Electric Co., Chicago, H.
Kentucky Electrical Co., Owensboro, Ky.
Lee Electric Co., Baltimore, Md.
Miller-Owen Elect. Co., Pittsburg, Pa.
Pledmont Electric Co., Asheville, N. G.
Ridgway Dynamo & Engine Co., Ridgway, Pa.
Robbins & Myers Co., Springfield, O.
Southwark Fdry. & Mch. Co., Philadelphia, Pa.
Sturtevant Co., B. F., Hyde Park, Mass.
Tricmph Electric Co., Cincinnati, O.
Westinghouse Elec. & Mfg. Co., Pittsburg, Pa.
Electrical Contractors, Instruments and

Electrical Contractors, Instruments and American Mach. & Mfg. Co., Charlotte, N. C. Carolina Electrical Co., Raleigh, N. C.

Crocker-Wheeler Co., Ampere. N. J.
Doubleday-Hill Electric Co., Pittsburg, Pa.
Engberg's Elect. & Mech. Works, St. Joseph, M.
Fort Wayne Electric Works, Ft. Wayne, Ind.
General Electric Co., Behencetady, N. Y.
Gergeors Electric Co., Chicago, Ill.
Johns-Manville Co., H. W., New York, N. Y.
Kentucky Electrical Co., Owenshoro, Ky.
Lee Electric Co., Baltimore, Md.
Levy, Deronda, Columbus, Gu.
Piedmont Electric Co., Asheville, N. C.
Robbins & Myers Co., Springfield, O.
Westinghouse Elec. & Mig. Co., Pittsburg, Pa.

Electro Magnet. [See Magnet Electro.] Elevating, Conveying and Power Trans-mission Machinery. [See also Conveying Mely, and Power Transmission Mely.] Jeffrey Mfg. Co., Columbus, O.

Jeffrey Mfg. Co., Columbus, G.

Elevators.
American Machine Co., Louisville, Ky.,
Curran Elevator Co., James H., Chedanath, G.,
Dodge Manufacturing Co., Mishawaka, Ind.,
Hollister-Wiltiney Co., Guiney, III
Kansas City Elevator Mfg. Co., Kansas City, Mo.,
Moffatt Machinery Mfg. Co., Charlotte, N. C.,
Ohio Elevator & Machine Co., Columbus, G.,
Otis Elevator Co., New York, N. Y.,
Sidney Elevator & Mfg. Co., Sidney, O.,
Speidel, J. G., Reading, Fa.,
Westbrook Elevator Co., Dauville, Va.

Elevator Safety Appliance. Roth Elevator Safety Co., Inc., Baltimore, Md.

Roth Elevator Buckets.

Elevator Buckets.
Caldwell & Son Co., H. W., Chicago, Hl.
Jeffrey Mfg. Co., Columbus, O.,
Link-Beit Co., Philadelphia, Pa.

Elevator Enclosures and Cabs,
Bolles fron & Wire Works, J. E., Detroit, Mich.
Cincinnati Mfg. Co., Cincinnati, O.
Dow Wire Works, Louisville, Ky.
Dufur & Co., Baltimore, Md.
Dufur, Bagott & Co., Baltimore, Md.
Jones & Co., L. E., Baltimore, Md.
Meyers Mfg. Co., The Fred J., Hamilton, O.
Ohlo Elevator & Machine Co., The, Columbus, O.
Otis Elevator Co., New York, N. Y.
Southern Wire & Iron Mfg. Co., Dallas, Tex,

Elevator Rope. [See Wire Rope.]

Elevator Safety Gates.
Elevator Safety Gate Co., Richmond, Ind. Emery Wheels. [See Grinding Wheels.] Engineers-

Emery Wheels. [See Grinding Wheels.]

Engineers—
COMBUSTION.
Improved Equipment Co., New York, N. Y.
CONSULTING.
Angle, Geo. W., New York, N. Y.
Jaudon Engineering Co., H. S., Savannah, Ga.
Lewis, Fred H., Birmingham, Ala.
Lide, Martin J., Birmingham, Ala.
Macfarren, S. J., Washington, D. C.
Serivenor, Arthur, Richmond, Va.,
Young, W. W., New York, N. Y.
DESIGNING—CONSTRUCTING.
Drum & Co., A. L., Chicago, III.
Foster-Creighton-Gould Co., Nashville, Tenu.
Gulf Coast Constr. Co., Houston, Tex.
Harlow Co., James H., Baltimore, Md.
Jaudon Engineering Co., H. S., Savannah, Ga.
Miller, C. E., Pittsburg, Pa.
Summers & Co., L. L., Chicago, III.
Welsr, Walden & Dukchart, Baltimore, Md.
White & Co., J. G., New York, N. Y.
DESIGNING, CONSTRUCTING, POWER PLANTS,
ETC.
Dodge, Day & Zimmerman, Philadelphia, Pa.
Drum & Co., A. L., Chicago, III.
Emory & Eisenbrey, Philadelphia, Pa.
Lea, Henry L., Chicago, III.
Emory & Eisenbrey, Philadelphia, Pa.
Lea, Henry L., Chicago, III.
Lockwood, Greene & Co., Boston, Mass.
Manning-Hughes Co., Charlotte, N. C.
Patterson & Davidson, Chicago, III.
Sirrine, J. E., Greenville, S. C.
Spiker, Wu. C., Atlanta, Ga.
Skevens, John A., Lowell, Mass.
Virgina Bridge & Iron Co., Ronnoke, Va.
Whitheld, Geo. H., Richmond, Va.

DRAINAGE.

Morgan Engineering Co., Memphis, Tenn.
EFFICIENCY.
Mactarren, S. J., Washington, D. C.
Suffern & Son, Birmingham, Ala.

Mactarren, S. J., Washington, D. C.
Suffern & Son, Birmingham, Ala.
Electric, Civil, Erc.
Arnold Co., The, Chicago, Ili.
Cothran & Cothran, Greenwood, S. C.
Crocker-Wheeler Co., Ampere, N. J.
Drane, Brent S., Charlotte, N. C.
Drum & Co., A. L., Chicago, Ili.
Emory & Elseubrey, Philadelphia, Pa.
Gloster, W. O., Manchester, Ky.
Kellholtz, P. O., Baltimore, Md.
Layman, E. F., Chelmuntt, O.
Lewis, Fred H., Birmingham, Ala.
Lide, Martin J., Birmingham, Ala.
Manning-linghes Co., Charlotte, N. C.
Morgan Engineering Co., Menphis, Tenn.
Potter, Alexander, New York, N. Y.
Reding & Howard, Baltimore, Md.
Rucker, B. Parks, Charlotte, N. C.
White & Co., J. G., New York, N. Y.
Whitfield, Geo, H., Richmond, Va.
GAS.

GAS. GAS.

Bartlett-Hayward Company, The, Baltimore, Md, Lea, Henry I., Chicago, Ill.

GEOLOGICAL.

Clapp, Frederick G., Pittsburg, Pa, Davis, Geo. C., Pitladelphia, Pa.,

Frochling & Robertson, Richmond, Va.,

HYDRAULIC AND SEWERAGE.

Hydraulic and Sewerage.

Burgwyn, C. P. E., Richmond, Va.
Drum & Co., A. L., Calcago, III.
Harlow Co., James H., Baltimore, Md.
Hatton, T. Chalkley, Wilmington, Del.
Manning-Hughes Co., Charlotte, N. C.
McCrary, Co., Inc., The J. B., Athinta, Ga.
Myers, E. W., Greensboro, N. C.
Few, Arthur, Atlanta, Ga.
Shields, W. S., Chicago, III.
Tucker & Laxton, Charlotte, N. C.
Webr, Walden & Diskelart, Baltimore, Md.
ICE AND REFRIGERATING.
Talt-Nordmeyer Eng. Co., St. Louis, Mo.
LANDSCAPE.
Drane, Brent S., Charlotte, N. C.
Reding & Howard, Baltimore, Md.
Mining.

Reding & Howard, Baltimore, Md.
MINING.

Gloster, W. O., Manchester, Ky.
REINFORCED CONCRETE CONSTRUCTION, BUILLA
INGS, BRIDGES, ETC.
Concrete Steel Engineering Co., New York, N. Y
Gardner & Howe, Memphis, Tenn.
Layman, E. F., Clincinnati, O.
Upton-Smoot Construction Co., Washington, D. C. WATER-WORKS.

Burgwyn, C. P. E., Richmond, Va. Myers, E. W., Greensboro, N. C.,

Engines.
GAS AND GASOLINE.
Blaisdell Machinery Co., Bradford, Pa.
Bogart Gas Power Eng. Co., Buffalo, N. Y.,
De La Vergne Machine Co., New York, N. Y.
Fairbanks, Morse & Co., Chicago, Ill.
Mietz, A., New York, N. Y.
Standard Gas Power Co., Atlanta, Ga.
Westinghouse Machine Co., The, Pittsburg, Pa.

OIL.

OIL.

Vington Mch. Co., New York, N. Y.

La Vergne Machine Co., New York, N. Y.

etz, A., New York, N. Y.

De La Vergne Machine Co., New York, N. Y.
Mietz, A., New York, N. Y.

Engines. (Steam.)
Allis-Chalmers Co., Milwaukee, Wis.
American Elower Co., Detroit, Mich.
American Elower Co., Detroit, Mich.
American Holst & Derrick Co., St. Paul, Minn.
Ames Iron Works, Oswego, N. Y.
Atins Engine Works, Indianapolis, Ind.
Ball Engine Works, Indianapolis, Ind.
Ball Engine Co., Erle, Ps.
Brownell Co., The, Dayton, O.
Buffalo Forge Co., Buffalo, N. Y.
Cameron & Barkiey Co., Charleston, S. C.
Chicago House Wrecking Co., Chicago, Ill.
Cooper Co., C. & G., Mt. Vermon, O.
Dake Engine Co., Grand Haven, Mich.
Engherg's Elect. & Mech. Works, St. Joseph Mo.
Glibbes Machinery Co., Columbia, S. C.
Griffith & Wedge Elect. & Mech. Works, St. Joseph, Mo.
Glibbes Machinery Co., Columbia, S. C.
Griffith & Wedge Co., Elect.
Harrisburg, Pa.
Hoven, Owen, Rentschler Co., Hamilton, O.
Houston, Shanwood & Gambie Co., Cincinnati, O.
Leffel & Co., James, Springfield, O.
Lombard Iron Works, Augusta, Ga.
Mecklenburg Iron Works, Co., Burlington, ia.
Phoenix Iron Works Co., Burlington, ia. Schotteld's Sons Co., J. S., Mircon, Gn., Smith-Couring Co., Richmond, V., Southern Engline & Boller Works, Juckson Startevant Co., B. F., Hyde Park, Mass, Chlon Iron Works, Co., Schm, Ah., Vilter Mg., Co., Miwankee, Wis, Westinghouse Machine Co., Pittsburg, Pa.

Engines. (Truck and Aeroplane.)

Envelopes.

Selden Co., Baltimore, Md.

Excavating Machinery. (Steam Shovels, etc.) Excavating Machinery. (Steam Shovels, etc. American Holst & Derrick Co., St. Paul, Minu, American Locsmotive Co., New York, N. Y. American Steel Dredge Co., Ft. Wayne, Ind. Baldwin Equipment & Supply Co., Chicago, III. Browning Mrg. Co., Mansheld, O., Bleryns Co., The, So. Milwaukee, Wis. Fairbanks Steam Shovel Co., Marion, O. Hayward Co., New York, N. Y. Jeffrey Mrg. Co., Columbus, O. Lidgerwood Mrg. Co., New York, N. Y. Males Co., Cincinnati, O. Marlon, O. Monighan Machine Co., Chicago, III. Owen Bucket Co., Civeland, O. Williams Co., The G. H., Cleveland, O. Williams Co., The G. H., Cleveland, O.

Excelsior Machinery.

Exhaust Heads.

Ahendroth & Root Mfg. Co., Newburgh, N. Y. American Spiral Pipe Works, Chicago, III. Greenwald Co., L. & E., Chichmatl, O. Hoppes Mfg. Co., Springfield, O.

Exhibits. (Machinery Builders' Equipment and Supplies.) and Supplies.)

Bourse, The, Philadelphia, Pa.

Builders' Exchange, Baltimore, Md.

Expansion Joints.

Alberger Condenser Co., New York, N. Y. Padger & Sons Co., E. B., Beston, Mass,

ours Powder Co., E. I., Wilming ton. Del.

Factory Sites. (Town and Raliroad.) [See Industrial, Agricultural and Commercial Opportunities.] Fans. (Electric.)

Pans. (Electric.)
Doubleday-Hill Electric Co., Pittsburg, Pa.,
General Electric Co., Schenectady, N. Y.,
Robbins & Myers Co., Springfield, O.,
Western Electric Co., New York, N. Y.,
Westinghouse Elec. & Mg. Co., Pittsburg, Pa.

Fans. (Ventilating.) [See Blowers, Exhaust Fans.]

Fastener Driving Machine. (Corrugated Saranac Machine Co., St. Joseph, Mich.

Feed-Water Heaters and Puriflers. Feed-Water Heaters and Purillers.
Alberger Condenser Co., New York, N. Y.
American Water Softener Co., Philadelphia, Pa.
Blake & Knowles Steam Pump Works, New
York, N. Y.
Brownell Co., Dayton, O.
Exeter Machine Works, Pittston, Pa.
Gibbes Machinery Co., Columbia, S. C.
Greenwald Co., I. & E., Clincinnati, O.
Hoppes Mfg. Co., Springdield, O.
McAdoo, Thomas, Philadelphia, Pa.
Murray Iron Works Co., Burlington, Is.
National Pipe Bending Co., New Haven. Conn.
Scaffe & Sons Co., Win, B., Pittsburg, Pu.
Stewart Heater Co., Buffalo, N. N.
Wheeler Condenser & Eng. Co., New York, N. Y.

Feed-Water Heater and Purifier and Oil Separator Combined.

Blake & Knowles Steam Pump Works, New York, N. Y., Stewart Heater Co., Buffalo, N. Y.

Felt. (Building, Sheathing.) Barrett Mfg. Co., Philadelphia, Pa.

Fencing, Entrance Gates, (Iron, Steel, Wire.) Fencing, Entrance Gates, (tron, Steel, Wire.)
American Steel & Wire Co., Ghicago, III.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Dow Wire Works, Louistille, Ky.
Dufur & Co., Baltimore, Md.
New Jersey Wire Gloth Go., Trenton, N. J.
Ohio Elevator & Mach. Co., The, Columbus, O.

Fertilizer Machy. [See also Phosphate Mchy.] Campbell, P. F., Philadelphia, Pa. Smith Co., T. L., Atlanta, Ga. Vailk & Murdock Iron Works, Charleston, S. C. Waiker & Elliott, Wilmington, Del. Wilmington Iron Works, Wilmington, N. O.

Piles.

Barnett Co., G. & H., Philadelphia, Pa.

Delta File Works, Philadelphia, Pa.

Nicholson File Co., Providence, R. I.

Filters. (Water, for Domestic and Inquestrial Purposes.)
American Water Softener Co., Philadelphia, Pa.
International Filter Co., Chicago, Ill.
Lynn-Superior Co., The. Cincinnatt, O.
New York Con. Jewell Fil. Co., New York, N. Y.
Roberts Filter Mg. Co., Philadelphia, Pa.
Scaife & Sons Co., Wm. B., Pittsburg, Pa.
Tucker & Laxton, Charlotte, N. C.

Fire Clay Brick. [See Brick, Fire Clay.] Fire Box Blocks. Ashland Fire Brick Co., Ashland, Ky.

Fire Door Fixtures. Peters & Son, Jas., Philadelphia, Pa. Victor Mfg. Co., Newburyport, Mass.

Fire Extinguishers.

Badger & Sons Co., E. B., Boston, Mass.
General Fire Extinguisher Co., Providence, R. I.

Belles Iron & Wire Works, J. E., Detroit, Mich. Chesapeake Iron Works, Baltimore, Md. Roanoke Iron Works, Inc., Roanoke, Va.

Fire Insurance.
Hartford Fire Insurance Co., Hartford, Conn. Fireplaces. (Artistic Brick.) ske & Co., Inc., New York, N. Y.

Fireproof Building Construction. (Steel.)

Fireproof Building Material. Dahlstrom Metallic Door Co., Jamestown, N. Y. Johns-Manville Co., H. W., New York, N. Y.

Fireproof Doors and Shutters.

Daldstrom Metallic Door Co., Jamestown, N. Y., Kinnear Mfg., Co., Columbius, O., New Orleans, Roof & Metal Co., New Orleans, La., Richmond, Safety Gate Co., Richmond, Ind. Finited States Metal Products Co., New York, N. Y. Victor Mfg., Co., Newburyport, Mass.

Fireproof Windows. [See Window Frames and Sashes (Fireproof).]

Fire Protection Hardware. Peters & Son, Jas., Philadelphia, Pa.

Peters & Sou, Jas., Philadelphia, Pa.

Flanges. (Iron and Steel.)

American Cast Iron Pipe Co., Birmingham, Ala.

American Pipe & Construction Co., Phila., Pa.

American Spiral Pipe Works, Chicago, Ill.

Cameron Steam Pump Wiss., A. S., New York, N. Y.

Dart Manufacturing Co., E. M., Providence, R. I.

Gemeral Fire Extinguisher Co., Providence, R. I.

Glamorgan Pipe & Foundry Co., Lynchburg, Va.

McWane Pipe Works, Lynchburg, Va.

McWane Pipe Works, Lynchburg, Va.

U. S. Cast Iron Pipe & Fdy, Co., New York, N. Y.

Whitlock Coll Pipe Co., Hartford, Com.

Wood & Co., R. D., Philadelphia, Pa.

Flexible Joints. oran Flex. Steam Joint Co., Inc., Louisville, Ky.

Flooring. (Cement.) gelini Bros., Montgomery, Ala.

Flooring. (Hardwood, Maple, Oak.) Carolina Portland Cement Co., Charleston, S. C. Northeross Mantel Co., W. J., Memphis, Tenn. Nashville Hardwid Flooring Co., Nashville, Tenn. Flour and Grist Mul Machinery and Supplies.

piles.
Caldwell & Sons Co., H. W., Chicago, Ill.
Glibbes Machinery Co., Columbia, S. C.
Nordyke & Marmon Co., Indianapolis, Ind.
Salem Foundry & Machine Works, Salem, Va.
Starr Co., B. F., Baltimore, Md.
Veatch & Co., L. R., Louisville, Ky.
Wolf Co., Chambersburg, Fa.

Flushtank Regulator.

Flushtanks-Merritt & Co., Camden, N. J.

Foot Valves. ameron Steam Pump Wks., A. S., New York, N. Y. Forges.
Buffalo Forge Co., Buffalo, N. Y.
Sturtevant Co., B. F., Høde Park, Mass.

Forgings.

Forgings.

Great Southern Automobile Co., Birmingham, Ala.

Richmond Forgings Corporation, Richmond, Va.

Weimer Chain & Iron Co., Lebanon, Pa.

Forms. (Steel Collapsible.) merete Form & Engine Co., Decroit, Mich

Foundations.

nderground Constr. Co., The, St. Louis, Mo.

Foundations. (Open or Pneumatic.) issouri Val. Bridge & Iron Co., Leavenw'th, Kan.

Foundry Equipment and Supplies. Paxson Co., J. W., Philadelphia, Pa. Frogs. [See Railroad Frogs and Switches.]

Fuel Economizer. Green Fuel Economizer Co., Matteawan, N. Y. Sturtevant Co., B. F., Hyde Park, Mass.

Fuel Oil.
Gulf Refining Co., Pittsburg, Pa.
Texas Co., The, New York, N. Y.

Fuel Oll Equipment. etroleum Iron Works Co., Sharon, Pa.

Furnace Builders. Riter-Conley Mfg. Co., Pittsburg, Pa. Fuses, Bases and Fittings.
Johns-Manville Co., H. W., New York, N. Y.

Galvanized Steel and Iron. Galvanized Steel and Iron.

American Sheet & Tin Plate Co., Pittaburg, Pa.

J. C. H. Gaivanizing Co., Philadelphia, Pa.

La Belle Iron Works, Steubenville, O.

McCalla, Harold, Philadelphia, Pa.

New Orleans Roof & Metal Co., New Orleans, La.

Wood Iron & Steel Co., Alan, Philadelphia, Pa.

Youngstown Sheet & Tube Co., Youngstown, O.

Gas Blowers. (Turbine.)
Terry Steam Turbine Co., New York, N. Y.

Gas Compressors.

Blaisdell Machinery Co., Bradford, Pa.
Ingersoil-Band Co., New York, N. Y.

Gas Holders.

tlett-Hayward Co., The, Baltimore, Md. cago Bridge & Iron Wks., Chicago., Ili.

Gas Machines. conomy Gas Mach. Co., Rochester, N. Y.

Gas Plants.

Gas Construction Co., Ft. Wayne, Ind.

Oas Plants and Benches. nproved Equipment Co., New York, N. Y.

Gas Plants. (Coal and Water.) artlett-Hayward Co., The, Baltimo ore Md.

Gas Producers.

Bogart Gas Power Eng. Co., Buffalo, N. Y. De La Vergne Machine Co., New York, N. Y. Improved Equipment Co., New York, N. Y. Standard Gas Power Co., Atlanta, Ga. Westinghouse Machine Co., Pittsburg, Pa. Wood & Co., R. D., Philadelphia, Ps. Gasoline and Kerosene.

Gulf Refining Co., Pittsburg, Pa. Texas Co., The, New York, N. Y.

Gas and Steam Fitters' Tools. nunders' Sons, D., Yonkers, N. Y. Gaskets. (Rubber.) J. Car Spring & Rubber Co., Jersey City, N. J.

Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chteage, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Bayton Globe Iron Works Co., Dayton, O.
Dodge Manufacturing Co., Misbawaka, Ind.
Earle Gear & Machine Co., The, Philadelphia, Pa.
Great Southern Automobile Co., Birmingham, Ala.
Jeffrey Mg. Co., Columbus, O.
Poole Engineering & Machine Co., Baltimore, Md.
Positive Clutch & Pulley Works, Buffalo, N. X.
Trunp Mfg. Co., Springfield, O. Geologists.

Clapp, Frederick C., Pittsburg, Pa. Freebling & Robertson, Richmond, Va.

Glass. (Plate, etc.) Binswanger & Co., Memphis, Tenn.

Governors.
Pickering Governor Co., Portland, Conn.

Grain Elevator Supplies. Grain Elevator Supplies.
Caldwell & Sons Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.,
Link-Belt Co., Nicetown (Philadelphia), Pa.

Granite. Harris Granite Quarries Co., Salisbury, N. C. Graphite.

Detroit Graphite Co., Detroit, Mich. Dixon Crucible Co., Joseph, Jersey City, N. J.

Grates and Grate Bars. Conroy Mfg. Co., North East, Md. Patch & Son Co., S. B., Streator, Ill. Thomas Grate Bar Co., Birmingham, Ala.

Gravel.

Arundel Sand & Gravel Co., Baltimore, Md. Cassels Cement Gravel Co., Augusta, Ga. Southern Sand & Gravel Co., Richmond, Va.

Greases and Lubricating Compounds. Cook's Sons, Adam, New York, N. Y. Galena Signal Oll Co., Franklin, Pa. Robinson & Son Co., Wm. C., Baltimore, Md. Texas Co., The, New York, N. Y.

Grease and Oll Cups and Lubricators. Cook's Sons, Adam, New York, N. Y.

Grinders. (Gypsum, Limestone, etc.) Gardner Crusher Co., New York, N. Y. Williams Pat. Crusher & Pulv. Co., Chicago, Ill.

Grinding Wheels.

Abrasive Material Co., Philadelphia, Pa. Carborundum Co., Niagara Falle, N. Y. Norton Co., Worcester, Mass. Vitriâed Wheel Co., Westfield, Mass.

Groovers.

Huther Bros. Saw Mfg. Co., Rochester, N. Y.

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Pipe. (Spiral Riveted.) Abendroth & Root Mfg. Co., Newburgh, N. T. American Spiral Pipe Works, Chicago, Ill.

Pipe. (Wood.) Fyckoff & Son Co., A., Elmira, N. Y.

Pipe. (Wrought.)
General Fire Extinguisher Co., Providence, R. L.
La Belle Iron Works, Steubenville, G.
National Tube Co., Pittsburg, Pa.
Youngstown Sheet & Tube Co., Youngstown, O.

Pipe Bends. Columbus Iron Works Co., Columbus, Ga., Whitlock Coll Pipe Co., Hartford, Conn.

Pipe Covering. (Steam.)

Johns-Manville Co., H. W., New York, N. V.
Southern Pipe Covering Co., Inc., Richmond, Va.
Wyckoff & Son Co., A., Elmira, N. Y.

Pipe Cutting and Threading Machinery. unders' Sons, D., Yonkers, N. Y.

Pipe Fittings.

American Cost Iron Pipe Co., Birmingham, Ala.
Columbus Iron Works Co., Columbus, Ga.
General Fire Extinguisher Co., Providence, R. I.
Wolf Co., Pred W., Chicago, Ill,
York Mfg. Co., York, Pa.

Pipe Jointing. (Gas and Water Main.) Leadite Co., The, Philadelphia, Pa.

Pipe Locator. lodern Iron Works, Quincy, Iti.

Pipe Unions and Joints.

Dart Mfg. Co., E. M., Providence, B. I.,
National Tube Co., Pittsburg, Pa.
Whitlock Coil Pipe Co., Hartford, Conn.

Pipe Wrenches and Cutters. Saunders' Sons, D., Yonkers, N.

Pitch. . Barrett Mfg. Co., Philadelphia, Pa. Planers. (Metal.) fanning, Maxwell & Moore, Inc., New York, N. T.

Pianing Mill Work. Massee & Felton Lumber Co., Macon, Ga.

Plaster of Paris. King & Co., J. B., New York, N. Y.

Plaster. Security Cement & Lime Co., Bultimore, Md. Plaster. (Asbestos Cement, Plaster of Paris, 1 King & Co., J. B., New York, N. Y.

Plaster Boards. King & Co., J. B., New York, N. Y. Plaster Products Co., Hampton, Va.

Plaster Machinery. Bartlett & Suow Co., C. O., Cleveland, O. Plates.
incinuati Iron & Steel Co., Cincinnati, O.
incinuati Iron & Steel Co., Alau, Philadelphia, Pa

Piugs. (Wall.)
Wicks & Co., Milton O., Glen Cove. N. Y.
Pneumatic Tools. [See Tools—Pneumatic.]

Poles. (Transmission Line; Steel.) Riter-Conley Mfg. Co., Pittsburg, Pa. Polishing Machinery. (Wheels and Blocks.) Abrasive Material Co., Philadelphia, Pa. Carborundum Co., Ningara Falls, N. Y. Springfield Tire & Rubber Co., Springfield, O. Vitrified Wheel Co., Westfield, Mass.

Vitrified Wheel Co., Westfield, Mass.

Power Transmission Machinery.

Balley-Lebby Co., Charleston, S. C.
Caldwell Co., Inc., W. E., Louisville, Ry.
Caldwell Co., Inc., W. E., Louisville, Ry.
Caldwell & Son Co., H. W., Chleago, Ill.
Crosson Co., Geo. V., Philadelphila, Pa.
Dayton Globe Iron Works Co., Dayton, O.,
Dodge Manufacturing Co., Mahawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.,
Greenwald Co., I. & E., Cinchnati, O.
Jeffrey Mig. Co., Columbus, O.
Jones & Laughlin Steel Co., Pittaburg, Pa.
Lane Mig. Co., Montpeller, Vt.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Morse Chain Co., Ithaca, N. Y.,
Nordyke & Marmon Co., Indianapolis, Ind.
Nordyke & Marmon Co., Indianapolis, Ind.
Poditire Clecking & Machine Co., Baltimore, Md.
Positire Clecking & Machine Co., Baltimore, Md.
Positire Clecking & Machine Co., Baltimore, Md.
Positire Clecking & Machine, Norfolk, Va.,
Rehofield's Sons Co., J. S., Macon, Ga.,
Rehofield's Sons Co., J. B., Chambersburg, Pa.

Presses, (Baling, Cottonseed Oll, etc., Hydraulie

Presses. (Baling, Cottonseed Oil, etc., Hydraulie and Power.)

Boomer & Boschert Press Co., Syracuse, N. Y. Cardwell Machine Co., Richmond, Va. Continental Gin Co., Birmingham. Als. Gibbes Machinery Co., Columbia, S. C.

Presses. (Stamping.) Bilsa Co., E. W., Brooklyn, N. Y. Lettler & Co., Charles, Brooklyn, N. Y. Preventive for Sap Stain. Church & Dwight Co., New York, N. Y.

Printers. (Book, Catalog, Job. etc.) Fleer-Mcclinier Co., Bultimore, Md. Franklin Press Co., Petersburg, Vn.

Protector Steel. (Concrete Curb, Steps, etc.) Steel Protected Concrete Co., Philadelphia, Pa.

Pulleys. (Friction Clutch.) Pulleys. (Friction Clutch.)
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son Co., H. W., Chicago, Ill.
Cresson Co., Gov. V., Pilladelphin, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Poole Engineering & Macline Co., Baltimore, Md.
Postitve Clutch & Pulley Works, Buffalo, N. X.
Sinclair-Scott Co., Baltimore, Md.,
Woods Sons Co., T. B., Chambersburg, Pa.

STEEL SPLIT.
American Pulley Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.

Dodge Manufacturing Co., Mishawaka, Ind.
WOOD SPLIT.
Caldwell Co., Inc., W. E., Louisville, Ky.,
Caldwell & Son Co., H. W., Chicago, Ill.
Dodge Manufacturing Co., Mishawaka, Ind,
Eclipse Wood Pulley Co., Inc., Berlin, Pa.,
Lane Mfz. Co., Montpelier, Vt.
Positive Clutch & Pulley Works, Buffialo, N. Y.
Saginaw Mfg. Co., Saginaw, Mich.
Salem Foundry & Mackine Works, Salem, Va.

Salem Foundry & Mackine Works, Salem, Va.

Pulleys, Shafting and Hangers.

Caldwell Co., Inc., W. E., Loulsville, Ky.
Caldwell & Son Co., H. W., Chleago, Ill.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Eclipse Wood Pulley Co., Inc., Berlin, Pa.
Golden's Foundry & Machine Co., Columbus, Ga.
Greenwald Co., I. & E., Cincinnatt, O.
Jeffrey Mfg. Co., Columbus, O.
Jeffrey Mfg. Co., Columbus, O.
Jeffrey Mfg. Co., Montpeller, Vi.
Link-Belt Co., Nicetown (Philadelphia), Pa.
Nordyke & Marmon Co., Indianapolis, Ind.
Positive Clutch & Pulley Works, Buffalo, N. Y.
Standard Rober Bearing Co., Pililadelphia, Pa.
Woods' Sous Co., T. B., Chambersburg, Pa.

Foods Sous Co., T. B., Chambersburg, Pa.

Pumps. (Centrifugal.)

therger Pump Co., New York, N. Y.,

uffalo Steam Pump Co., Buffalo, N. Y.

the Laval Steam Turbine Co., Trenton, N. J.,

merson Steam Pump Co., Alexandria, Ya.

rle Pump & Engine Works, Eric, Pa.

oulds Mfg. Co., Seneca Falls, N. Y.

torris Machine Works, Baldwinswille, N. Y.

fheeler Condenser & Eng. Co., New York, N. Y.

food & Co., R. D., Philadelphia, P.

forthington, H. R., New York, N. Y.

Worthington, H. R., New York, N. Y.

Pumps. (Hydraulle.)

Juffalo Steam Pump Co., Buffalo, N. Y.

Jardwell Machine Co., Richmond, Va.

Jean Bros. Steam Pump Was., Indiauapolis, Ind.

Jardwell Machine Co., Alexandria, Va.

Jardwell Machine Co., Seneca Falls, N. Y.

Worthington, H. R., New York, N. Y.

Pumps. (Lift and Force.) Goulds Mfg. Co., Seneca Falls, N. Y. Ingersoll-Rand Co., New York, N. Y.

Pumps. (Odorless and Excavating.) oulds Mfg. Co., Seneca Falls, N. Y.

Pumps. (Pneumatic.) Ingersoll-Rand Co., New York, N. Y.

ngersoll-Rand Co., New York, N. Y.

Pumps. (Power Boller Feed.)

therger Pump Co., New York, N. Y.

ameron Steam Pump Wks. A. S., New York, N. Y.

tean Bros. Steam Pump Wks., Indianapolis, Ind.

loulds Mfg. Co., Seneca Fulls, N. Y.

teGowan Co., John H., Cincinnatt, O.

toffatt Machinery Mfg. Co., Charlotte, N. C.

lurray Iron Works Co., Burlington, Ia.

tyers & Bros., F. E., Asbland, O.

alon Steam Pump Co., Battle Creek, Mich.

forthington, H. R., New York, N. Y.

Pumps. (Rotary.) Goulds Mfg. Co., Seneca Falls, N. Y. McGowan Co., John H., Cincinnati, O.

Pumps. (Steam.)

Blakeslee Mfg. Co., Du Quoin, III.

Buffalo Steam Pump Co., Buffalo, N. Y.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Cameron & Barkley Co., Charleston, S. C.

Cook Well Co., The, St. Louis, Mo.

Dean Bros. Steam Pump Wks., Indianapolis, Ind.

Deane Steam Pump Co., Holyoke, Mass.

Fairbanks, Morse & Jo., Cidengo, III.

Gibbes Machinery Co., Columbia, S. C.

Goulds Mfg. Co., Seneca Falls, N. Y.

Hooven, Owen, Rentschler Co., Hamilton, O.

Keystone Pump & Well Eng. Co., Beaver Falls, Pa.

McGowan Co., John H., Cinclunati, O.

Murray Iron Works Co., Burlington, Ia.

Price Machinery Co., S. M., Norfolk, Va.

Sydnor Pump & Well Co., Richmond, Va.

Union Steam Pump Co., Battle Creek, Mich.

Wheeler Condenser & Eng. Co., New York, N. Y.

Wortlington, H. B., New York, N. Y. (Steam.)

Pumps. (Trench.) H. & E. Mfg. Co., Milwaukee, Wis. ulds Mfg. Co., Seueca Falls, N. Y.

Pumps. (Vacuum.)
berger Pump Co., New York, N. Y.
ean Bros. Steam Pump Wks., Indianapolis, Ind.
nulds Mfg. Co., Sencer Falls, N. Y.
nifth Co., T. L., Atlanta, Ga.
dion Steam Pump Co., Battle Creek, Mich.
heeler Condenser & Eng. Co., New York, N. Y.

Pumping Machinery.

Allis-Chalmers Co., Milwaukee, Wis.
Blakeslee Mfg. Co., Du Quoin, Ill.
Cameron Steam Pump Wks., A. S., New York, N. Y.
C. H. & E. Mfg. Co., Milwaukee, Wis.
Cook Well Co., The, St. Louis, Mo.
Dean Bros. Steam Pump Wks., Indinapolis, Ind.
Deane Steam Pump Oo., Holyoke, Mass.
Deming Co., Salein, O.
Erie Pump and Engine Works, Erle, Pa.
Fairbanks, Morse & Co., Chicago, Ill.
Boulds Mfg. Co., Seneca Fulls, N. Y.
Hooven, Owen, Rentschler Co., Hamilton, O.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Moffatt Michinery Mfg. Co., Charlotte, N. C.
Morris Machine Works, Baidwinsville, N. Y.
Myers & Bro., F. E., Ashland, O.
Purser, J. R., Charlotte, N. C.
Sanitary Pump Co., Dayton, O.
Sydnor I ump & Well Co., Richmond, Va.
Dinon Steam Pump Co., Battle Creek, Mich.
Wood & Co., R. D., Philadelphia, Pa.
Worthington, H. R., New York, N. Y.

Punching and Shearing Machinery.
Battle Creek, Mich.

Punching and Shearing Machinery. rtisch & Co., Cambridge City, Ind. ss Co., E. W., Brooklyn, N. Y. yersford Foundry & Mach. Co., Royersford, Pa.

Pyrites Burners. Pratt Engineering & Mach. Co., Atlanta, Ga.

Quarrying and Stonecutting Machinery. Ingersoll-Rand Co., New York, N. Y.

Railroads. (Agricultural and Industrial Oppor-tunities.) [See Industrial, Agricultural and Commercial Opportunities.] Railroads. (Passenger Department.) Illinois Central Railroad, Chicago, III.

Railroad Equipment and Supplies. (New and

Railroad Equipment and Suppiles. (New and Second-hand.)

American Frog & Switch Co., Hamilton, O. American Locomotive Co., New York, N. Y. American Locomotive Co., New York, N. Y. American Valve & Meter Co., Clincinnatt, O. Balley-Lebby Co., The, Charleston, S. C. Baldwin Equipment & Suppily Co., Chicago, Ill. Birmingham Rail & Loco. Co., Birmingham, Ala. Boston Iron & Metal Co., Bailtimore, Md. Cincinnatt Frog & Switch Co., Chicago, Ill. Foster Co., L. B., Pittsburg, Pa. Georgia Car & Locomotive Co., Atlanta, Ga. Hoffman & Co., E. C., Baltimore, Md. Indiana Steel & Iron Co., Pittsburg, Pa. Kitby Frog & Switch Co., Birmingham, Ala. Macleary, J. H., Surfolk, Va. Males Co., Clincinnatt, O., Pittsburg, Pa. Kithy Frog & Switch Co., Birmingham, Ala. Macleary, J. H., Surfolk, Va. Males Co., Clincinnatt, O., Co., Co., Co., Raithmore, Md. Mathes Iron & Metal Co., G., St. Louis, Mo. May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Houston, Tex. Newhall Eng. Co., Geo. M., Philadelphia, Pa. Read Co., Howard W., Philadelphia, Pa. Sherwood, E. C., New York, N. Y. Smith-Courtney Co., Richmond, Va. Southern Iron & Equipment Co., Atlanta, Ga. Southern Supply Co., Norfolk, Va. Steel Rail Supply Co., The, New York, N. Y. United States Rail Co., The, Huntington, W. Va. Weis Frog Co., Cincinnati, O. West Virginia Rail Co., The, Huntington, W. Va. Weisen & Explys Co., Walter A., St. Louis, Mo. Railroad Frogs and Switches.

Zeinicker Supply Co., Walter A., St. Louis, M Railroad Frogs and Switches. American Frog & Switch Co., Hamilton, O. Cincinnati Frog & Switch Co., Cincinnati, O. Hoffman & Co., R. C., Birtinore, Md. Kilby Frog & Switch Co., Birningham, Ala. Mathes Iron & Metal Co., G., St. Louis, Mo. May & Turner Co., Atlanta, Ga. Robinson & Orr., Pittsburg, Pa. Sweet's Steel Co., Williamsport, Pa. Weir Frog Co., Cincinnati, O. on, O.

Sweet's Steel Co., Williamsport, Pa. Weir Frog Co., Chicanati, O.

Rails. (Steel.)

Baldwin Equipment & Supply Co., Chicago, Ill. Carnegic Steel Co., Pittsburg, Pa.
Foster Co., L. B., Pittsburg, Pa.
Foster Co., L. B., Pittsburg, Pa.
Foster Co., L. B., Pittsburg, Pa.
Hoffman & Co., R. C., Baltimore, Md.
Hunt Co., C. W., West New Brighton, N. Y.
Hyde Bros. & Co., Pittsburg, Pa.
Levis & Co., Henry, Philadelphia, Pa.
Meleury, J. E. M. Suffolia, Co., St. Louis, Mo.,
May & Turner Co., Atlanta, Ga.
May & Turner Co., Atlanta, Ga.
National Iron & Steel Co., Hougstown, O.,
Robinson & Cor., Pittsburg, Pa.
Newhall Eng. Co., Geo. M., Philadelphia, Pa.
Republic Iron & Steel Co., Youngstown, O.,
Robinson & Corr., Pittsburg, Pa.
Steel Rail Iron & Steel Co., Youngstown, O.,
Robinson & Corr., Pittsburg, Pa.
Steel Rail Supply Co., The, New York, N. Y.
Sweet's Steel Co., Williamsport, Pa.
Tennessee Coal, Iron & R. R. Co., B'mgh'm, Ala.
United States Rail Co., The, New York, N. Y.
West Virginia Rail Co., The, Huntington, W. Va.
Wilson & Co., E. H., Philadelphia, Pa.
Zelnicker Supply Co., Walter A., St. Louis, Mo.
Rail Braces, Crossings, etc. [See R. R. Frogs

Rail Braces, Crossings, etc. [See R. R. Frogs Railways. (Industrial.)
Chase Fdry. & Mfg. Co., Columbus, O.
Hunt Co., C. W., West New Brighton, N. Y.
Link-Belt Co., Nicetown (Philadelphia), Pa.

Rams. (Hydraulic.) [See Hydraulic Rams.]

Reamers. Morse Twist Drill & Mch. Co., New Bedford, Mass.

Refrigerating Machinery and Supplies. merican Huhn Packing Co., New York, N. Y.

Reinforcing Bars. Carnegle Steel Co., Pittsburg, Pn. Concrete-Steel Co., New York, N. Y. Concrete Steel Engineering Co., New York, N. Y. Franklin Steel Co., Franklin, Pn.

Repairing. (Armatures and Elect. App.) Nashville Armature Works, Nashville, Tenn.

Repairing. (Power Plants.) Strickland Meh. Co., Richmond, Va.

Riveters. (Pneumatic.)
Chicago Pneumatic Tool Co., Chicago, III.
Independent Pneumatic Tool Co., Chicago, III.
Ingersoil-Rand Co., New York, N. Y.

Ingerson-tand Co., New York, N. I.

Road Machinery.
Austin-Western Co., Ltd., The, Chicago, Ill.
Buffalo Steam Roller Co., Buffalo, N. Y.
Case Threshing Mach. Co., J. I., Bucine, Wis.
Iroquois Iron Works, Buffalo, N. Y.
Kelly Springfield Road Roller Co., Springfield, O.
Syracuse Cillide Plow Co., Syracuse, N. Y.
Universal Road Mehy. Co., Kingston, N. Y.

Roadmaking Materials. Koadmaking Materials.

Barber Asphalt Paving Co., Philadelphia, Pa.

Standard Oil Co., Inc., Road Oil Dept.

Texas Co., The, New York, N. Y.

Road Roller. (Steam.)

Austin-Western Co., Ltd., The, Chicago, Ill.

Buffalo Steam Roller Co., Buffalo, N. Y.

Lase Threshing Mach. Co., J. I., Racine, Wis.

roquois Iron Works, Buffalo, N. Y.

Kelly Springfield Road Roller Co., Springfield, O.

Universal Road Mchy Co., Kingston, N. Y.

Road Oil.

Ilf Refining Co., Pittsburg, Pa.

andard Oil Co., Inc., Road Oil Dept.

xas Co., The, New York, N. Y.

Road Plows. ase Threshing Mch. Co., J. I., Racine, Wis. gracuse Chilled Plow Co., St. Louis, Mo.

Road Preservative.
Gulf Refining Co., Pittsburg, Pa.
Standard Oil Co., Inc., Road Oil Dept.
Texns Co., The, New York, N. Y.

Rock Crushers. [See Crushers, Rock.]
Roll Grinding and Corrugating. (Flour Mills.)
eatch & Co., L. R., Louisville, Ky. Rolled Metal Shapes. (For Building Material

States Metal Products Co., New York, N. Y. Rolls. (Bending and Straightening.) Bertsch & Co., Cambridge City, Ind.

Roofers' and Tinners' Supplies. Merchant & Evans Co., Philadelphia, Pa. Roofing. (Contractors for Laying.) Diniaco & Bro., A., Pittsburg, Pa.

Roofing. (Felt, Tar, Asbestos, Asphalt, Tin, etc.)
Allen, Herbert F. L., Washington, D. C.
American Sheet & Tin Plate Co., Pittaburg, Pa.
Armitage Mfg. Co., Blehmond, Va.
Barber Asphalt Paving Co., Philadelphia, Pa.
Barrett Mfg. Co., Philadelphia, Pa.

Bermingham & Seaman Co., Chicago, Ill.
Bird & Son, F. W., East Waiptle, Mass.,
Cameron & Barkley Co., Charleston, S. C.,
Carolina Fortland Cement Co., Charleston, S. C.,
Cincinnati Sheet Metal & Rfg. Co., Cincinnati, O.
Johns-Manville Co., Il. W., New York, N. Y.
National Roofing Co., Tonawanda, N. Y.
Standard Faint Co., New York, N. Y.
Wurren-Elret Co., Philadelphia, Pa.

Roofing. (Cement.)
Carey Mfg. Co., Philip, Cincinnati, O.

Roofing. (Metal Shingles.) [See Shingles, Metal. I Chelmant Sheet Metal & Rfg. Co., Cincinnati, O. Cartright Metal Roofing Co., Philadelphia, Pa. Edwards Mfg. Co., The, Cincinnati, O. Hilwaukee Corrugating Co., Milwaukee, Wis.

Roofing. (Slate.)
East Baugor Consol. Slate Co., East Baugor, Pa.
Galt & Sons, John, New York, N. Y.
Gennine Baugor Slate Co., Easton, Pa.
Hower, J. K., Slatington, Pa.
Johnson, E. J., New York, N. Y.

Roofing and Siding. (Bird Sand and Chipped Slate Surfaced.) Bermingham & Seaman Co., Chicago, Ill.

Roofing and Siding. (Flexible Cement, Bur-Bermingham & Seaman Co., Chicago, Ill.

Roofing and Siding. (Metal.) Roofing and Siding. (Metal.)
merican Rolling Mill Co., Middletown, O.
merican Sheet & Tin Plate Co., Pittsburg, Pa.
meron & Burklev Co., Charleston, S. C.
merimati Sheet Metal & Rig. Co., Cincinnati, O.
riright Metal Roofing Co., Philadelphia, Pa.
kwards Mig. Co., The. Cincinnati, O.
radman Roofing Co., Chuchnati, O.
radman Roofing Co., Chuchnati, O.
kwantee Corrugating Co., Milwaukee, Wis.
w Orleans Rig. & Metal Wks., New Orleans, La.
messee Metal Culvert Co., Nashville, Tenn.
mngstown Sheet & Tube Co., Youngstown, O.

Rope.
American Mfg. Co., New York, N. Y.
Broderick & Bascom Rope Co., St. Louis, Mo.
Columbian Rope Co., Anburn, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.

Whitlock Cordage Co., New York, N. Y.
Rope. (Transmission and Hoisting.)
American Mfg. Co., New York, N. Y.
American Steel & Wire Co., Chicago, III.
Broderick & Bascom Rope Co., St. Louis, Mo.
Caldwell Co., Inc., W. E., Louisville, Ky.
Columbian Rope Co., Auburn, N. Y.
Dodge Manufacturing Co., Mishawaka, Ind.
Hunt Co., C. W., West New Brighton, N. Y.
Plymouth Cordage Co., North Plymouth, Mass.
Whitlock Cordage Co., New York, N. Y.
Wood's Sons Co., T. B., Chambersburg, Pa. Rone Drives.

Rope Drives.
Caldwell Co., Inc., W. E., Louisville, Ky.
Caldwell & Son, H. W., Calcago, III.
Cresson Co., Geo. V., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind
Jones & Laughlin Steel Co., Pittsburg, Pa
Wood's Sons Co., T. B., Chambersburg, I

Rope Machinery. uskell-Dawes Machine Co., Boston, Mass.

Rubber Goods. Eureka Fire Hose Mfg. Co., New York, N. Y. New Jersey Car Sp'g & Rub. Co., Jersey City, N. J.

Rules. (Steel.)
ufkin Rule Co., The. Saginaw, Mich.
arrett Co., L. S., Athol, Mass.

Safes and Vaults. York Safe & Lock Co., York, Pa.

Safety Appliance. (For Elevator.) Roth Elevator Safety Co., Inc., Baltimore, Md.

Arundel Sand & Gravel Co., Baltimore, Md. Cassela Cement Gravel Co., Augusta, Ga. Kirkpatrick Sand & Cem. Co., Birmingham, Ala. Southern Sand & Gravel Co., Bichmond, Va.

Sand Lime Brick Machinery. American Clay Machinery Co., The, Bucyrus, O. Sand Rammers. ilcago Pneumatic Tool Co., Chicago, Ill.

Sap Stain Preventive. Church & Dwight Co., New York, N. T.

Sash Chain. Niagara Falls Metal Stamping Works, Niagara Falls, N. Y.

Saws. Saws.
Glibbes Machinery Co., Columbia, S. C.
Huther Bros. Saw Mfg. Co., Rochester, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
Sydnor Pump & Well Co., Richmond, Va.

Saws. (Band.) Smith Machine Co., H. B., Smithville, N. J.

Saws. (Hack.) Starrett Co., L. S., Athol, Mass.

Sawmili Dogs. Soule Steam Feed Works, Meridian, Miss.

Sawmills. Appomattox Iron Works, Petersburg, Va. Gainesville Iron Works, Gainesville, Ga. Vance & Co., J. A., Salem, N. C.

Vance & Co., J. A., Salem, N. C.

Sawmill Machinery.

Balley-Lebby Co., Charleston, S. C.
Cameron & Barkley Co., Charleston, S. C.
Chase Turbine Mfg. Co., Orange, Mass.
Gibbes Machinery Co., Columbia, S. C.
Knight Mfg. Co., Canton, O.
Lane Mfg. Co., Montpeller, Vt.
Meckleuburg Iron Works. Charlotte, N. C.
Price Mehy. Co., S. M., Norfolk, Va.
Schofield's Sons Co., J. S., Macon, G.
Southern Engine & Boller Works, Jackson, Tenn.
Sydnor Pump & Well Co., Bichmond, Va.
Union Iron Works Co., Selma, Als.
Vance & Co., J. A., Salem, N. C.

Saw Sharmeners.

Saw Sharpeners.

Abrasive Material Co., Philadelphia, Pa.
Carborundum Co., Niagara Falls, N. Y.
Norton Co., Worcester, Mass.
Vitrified Wheel Co., Westfield, Mass.

Saw Sharpeners and Files. (Cotton Gin.) Carver Cotton Gin Co., East Bridgewater, Mas Scales.

we Scale Co., New York, N. Y. me Scale & Mfg. Co., Rome, Ga. andard Scale & Supply Co., Pittsburg, Pa.

Screening Apparatus. Walker & Elliott, Wilmington, Del.

Screens. (Fly, Window and Door.) ew Jersey Wire Cloth Co., Trenton, N. J.

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Tennesses Wood Iro

Steels Field & Jessops S

Carnegie Steel

American Baltimore Bartiett--Chesapea Chicago I Farris Br Missouri Kans. Phoenix Biter-Con Roanoke Schreiber

Steel C

Steel F

Bartlett-I Casey-Hee Chattanoo Chicago I Hoffman Phoenix I Republic

Steel I

Carnegle : Joues & L

Steerin Dake Eng

Stencil

Baltimore Dixie Seal

Stirrup

Stock (

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Stokers Babcock & Harrisburg Westingho

Storage

Lee Electric Elec. Storic Westingho

Strainer Cameron St

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offman & nes & La ssouri V

Kans. Owego Brid Phoenix Ire

Roanoke Br.
Roanoke Ir.
Roanoke Ir.
Schreiber &
Snead Arch
Tennessee (
Vincennes )
Virginia Br.
Verk Bridge

Screens. (Mining.) Screens, (Mining.)
Cresson Co., Geo. V., Philadelphia, Pa.,
Erdle Perforating Co., Rochester, N. Y.,
Hendrick Mfg. Co., Carbondale, Pa.,
Jeffrey Mfg. Co., Columbus, O.,
New Jersey Wire Cloth Co., Trenton, N. J.,
Mundt & Sons, Charles, Jersey City, N. J.,
McLanahan-Stone Mach. Co., Hollidaysburg, Pa.,
Symons Bros., Milwaukee, Wis.

Searchlights. Wayne Electric Works, Ft. Wayne, Ind.

Separators. (Dust.)

Buffalo Forge Co., Buffalo, N. Y.

Buffalo Bros. Impact Pulv. Co., Chicago, III.

Savannah Blow Pipe Co., Savannah, Ga.,

Skinner Bros., St. Louis, Mo.

Sewer Pipe Machinery. American Clay Machinery Co., The, Bucyrus, 0, Tapliu-Rice-Clerkin Co., Akron, O.

Sewer Pips. (Vitrified.)
Carolina Portland Cement Co., Charleston, 8. 0,
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens Sons Co., H., Maron, Ga.

Shafting. (Polished Steel.)

'leld & Co., Inc., Philadelphia, Pa.

ones & Laughlin Steel Co., Pittsburg, Ps.

tepublic Iron & Steel Co., Youngstown, O. Shafting Boxes. Hyatt Roller Bearing Co., Newark, N. J.

Shafting. (See Pulleys, Shafting and Hangers.) Shapes. (Rolled Steel, Brass and Bronze,) ilted States Metal Products Co., New York, N.Y.

Sharpening Stones. Norton Co., Worcester, Mass. Vitrified Wheel Co., Westfield, Mass.

Shears. (Metal.) Royersford Fdry. & Mach. Co., Royersford, Pa.

Sheet Brass and Copper.
Hussey & Co., C. G., Plitsburg, Pa.
Merchant & Evans Co., Philadelphia, Pa.

Sheet Metal Working Machinery. Bilss Co., E. W., Brooklyn, N. Y.

Sheet Steel and Iron. Allegheny Steel Co., Pittsburg, Pa.,
American Rolling Mill Co., Middletown, O.,
American Sheet & Tin Plate Co., Pittsburg, Pa.,
Clucinnati Iron & Steel Co., Clucinnati, O.,
Republic Iron & Steel Co., Voungstown, O.,
Tennessee Coal, Iron & R. R. Co., Pingh'm, Ala,
Wood Iron & Steel Co., Alan, Philadelphia, Pa.,
Youngstown Sheet & Tube Co., The, Youngstown, O.

Shingles. (Metal.)

Shingles. (Metal.)

Carollan Portland Coment Co., Charleston, 8. C.,

Chartmangan Rife. & Febry. Co., Claritamozan, Tenn.

Chartmanti Sheer. Metal. & Rig. Co., Cheimati, 6.

Cartright Metal. Rooting Co., Philadelphia, Pa.

Edwards Mig. Co., Cheimati, 6.

Hyndman Rooting Co., Cheimati, 0.

Milwaukee Corrugating Co., Milwaukee, Wis.

Shipping Tags. Jennison Mfg. Co., Boston, Mass.

Shovels. (R. R. Contractors', Fdry., Mill, etc.)
Texas Handle Co., Houston, Tex.

Shredders. (Bark, Chip, etc.) Williams Pat. Crush. & Pul. Co., The, Chicago, Ill. Shutters. (Iron.)

Bolles Iron & Wire Works, J. E., Detroit, Mich. Chesapeake Iron Works, Baltimore, Md.

(Steel Rolling.) Shutters. (Steel Rolling.) Kinnear Mfg. Co., Columbus, O.

Shutters. (Tin Clad.) ctor Mfg. Co., Newburyport, Mass

Siding and Roofing. (Bird Sand and Chipped Slate Surfaced.) Bermingham & Seaman Co., Chicago, III.

Signs. (Metal Lithographed.) Southern Can Co., Baltimore, Md. Signs. (Road, Street, Outdoor, Advt.) Indestructible Sign Co., Bishopville, S. C.

Skylights and Cornices.
Milwaukee Corrugating Co., Milwaukee, Wis.
New Orleans Rfg. & Metal Wks., New Orleans, La.

Siate. (Structural, Sanitary, etc.)
Carolina Portland Cement Co., Charleston,
East Bangor Consol. Slate Co., East Bangor
Genuine Bangor Site Co., East Bangor
Hower, J. K., Slatington, Pa.

Stater's Tools. Galt & Sons, John, New York, N. Y.

Sluice Gates and Appliances. Coldwell-Wilcox Co., Newburgh, N. Y.

Smokestacks. (Iron and Steel.)
Chattanoga Boller & Tank Co., Chat'n'ga, Tesa.
Keeler Co., E., Williamsport, Pa.
Lombard Iron Works, Augusta, Ga.
Petroleum Iron Works Co., Sharon, Pa.
Schofield's Sons Co., J. S., Macon, Gs.
Virginia Bridge & Iron Co., Roanoke, Vs.

Smokestacks. (Steel-Concrete.) Weber Chimney Co., Chicago, Ill.

Speedometers.
Electric Speedometer Co., Washington, D. C.

Spikes. [See Nails and Spikes.] Springs. (Machinery, Railway, Spiral.) American Steel & Wire Co., Chicago, Ill. Cary Spring Works, New York, N. Y. Raymond Mfg. Co., Ltd., Oerry, Pa.

Sprinklers. (Automatic.) General Fire Extinguisher Co., Providence, R. L

Stamp Mills. ecklenburg Iron Works, Charlette, N. C.

Stamps. (Brass, Rubber.) Bennett Rubber Stamp & Seal Co., Atlanta, Ga. Dixie Seal & Stamp Co., Atlanta, Ga.

Standpipes.
Chattanoga Boller & Tank Co., Chat'n'ga, Tunk Chicago Bridge & Iron Wks., Chicago, Ill.
Hartley Boller Works, Mostgomery, Ala.
Keeler Co., E., Williamsport, Fa.
Petroleum Iron Works Co., Sharcus, Fa.

Stapling Machinery. (Fruit Package Basket, Saranac Machine Co., St. Joseph, Mich.

Stationers. (Envelopes, Letter and Bill Heads, etc.)

Steam Feeds.

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Steam Fitters' Supplies.

Steam Fire Extinguisher Co., Providence, R. I. unders' Sons, D., Yonkers, N. Y.

Steam Heating. Steam Heating. heral Fire Extinguisher Co., Providence, R. I. eler Co., E., Williamsport, Pa. & Hammond Co., The, Cincinnati, O.

Steamship Lines.

Steamship Lines.

Baitimore Steam Packet Co., Baltimore, Md.

Chesapeak Steamship Co., Baltimore, Md.

Merchant & Miners' Trans. Co., Baltimore, Md.

Steam Separators.

Hoppes Mfg. Co., Springfield, O.
Lindatrom's Mach. Wks., John T., Allentown, Pa.

Steam Shovel Chains. Steam Shovels. [See Excavating Machinery.] Steam Shovels. (Revolving.)
owning Engineering Co., Cleveland, O.

Steam Specialties.

owell Co., Wm., Cincinnati, O.

arner, J. R., Charlotte, N. C.

Steam Traps.
American Blower Co., Detroit, Mich.
Jeaking Brows, New York, N. Y.
Lindstrom's Mach. Wks., John T., Allentown, Pa.

Steel. n Rolling Mill Co., Middletown, O. Steel Co., Pittsburg, Pa. Co., Inc. Philidelphia Pa., & Co., Inc. Philidelphia Pa., Val. Works, Steel Co., Ichanon, Pa., Fron Works, Steelberville, O., Iron & Steel Co., Youngstown, O. e Conl, Iron & R. R. Co., Birm'gh'm, Ala., on & Steel Co., Alan, Philadelphia, Pa. Steels. (Tool.)

Steels. (1001.)
Field & Co., Inc., Philadelphia, Pa.
Jessops Sons Steel Sales Co., Wm., St. Louis, Mo.

Steel. (Vanadium.) farnegie Steel Co., Pittsburg, Pa.

Steel Buildings. (Designers, Builders.)

Steel Buildings. (Designers, Builders.)

American Bridge Co., of New York, New York, N. Y.

Baitimore Bridge Co., Baitimore, Md.

Bartiett-Hayward Co., The, Baitimore, Md.

Cheapaeke Iron Works, Baitimore, Md.

Cheapaeke Iron Works, Baitimore, Md.

Chiego Bridge & Iron Wiks., Chicago, Ill.

Farris Bridge Co., Pittsburg, Pa.

Missouri Valley Bridge & Iron Co., Leavenworth,

Kans.

Phoenix Iron Co., Philladelphia, Pa.

Riste-Conley Mg., Co., Pittsburg, Pa.

Boanoke Bridge Co., Roanoke, Va.

Schrieber & Sons Co., The L., Cincinnati. O.

Boand Architectural Iron Works, Louisville, Ky.

Virginia Bridge & Iron Co., Roanoke, Va.

Steel Casting.
Cracible Steel Castings Co., Lansdowne, Pa.,
Boffman & Co., R. C., Baltimore, Md.
Reliance Steel Casting Co., Pittsburg, Pa.,
Biverside Steel Casting Co., Newark, N. J.

Steel Plate Work.

Steel Plate Work.

articlet-Hayward Co., The, Baltimore, Md.

asey-Hedges Co., Chattanooga, Tenn.

battanooga Bioler & Tank Co., Chatt'n'ga, Tenn.

bleago Bioler & Tank Co., Chatt'n'ga, Tenn.

bleago Bioleg & Iron Wks., Chlengo, Ill.

boenix Iron Co., P. G., Battimore, Md.

boenix Iron Co., Philadelphia, Pa.

pepublic Iron & Steel Co., Youngstown, O.

liter-Conley Mfg. Co., Plitaburg, Pa.

Steel Protector. (Concrete Curb Steps, etc.)
[See Protector Steel.]

Carnegie Steel Co., Pittsburg, Pa.
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Dake Engine Co., Grand Haven, Mich. Stencils.

Baltimore Office Supply Co., Baltimore, Md. Dixie Seal & Stamp Co., Atlanta, Ga.

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Stokers. (Mechanical.)
Babecck & Wilcox Co., New York, N. Y.
Barrisburg Fdry. & Mach. Works, Harrisburg, Pa.
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Storage Batteries.

Lee Electric Co., Baltimore, Md. Elec. Storage Battery Co., The, Philadelphia, Pa. Westinghouse Machine Co., Pittsburg, Pa.

Strainers.
Cameron Steam Pump Wks., A. S., New York, N. Y.

Cameron Steam Pump Wks., A. S., New York, N. Y.

Structural Steel and Iron.

Merican Bridge Co. of New York, New York, N. Y.

Baltimore Bridge Co., Baltimore, Md.

Bartight-Hayward Co., The, Baltimore, Md.

Beimont Iron Works, Inc., Philadelphia, Pa.

Camegie Steel Co., Pittsburg, Pa.

Cheapseake Iron Works, Baltimore, Md.

Cheapseake Iron Works, Baltimore, Md.

Cheap Bridge & Iron Wks., Chicago, Ill.

Chapter Co., Pittsburg, Pa.

Cheap Bridge & Iron Co., Des Molnes, Ia.

Book Molnes Bridge & Iron Co., Pittsburg, Pa.

Misson Lamblin Steel Co., Pittsburg, Pa.

Kasa, Valley Bridge & Iron Co., Leavenworth,

Kasa, Valley Bridge & Iron Co., Leavenworth,

Associated Pringle & Now St.

Kans.

Oweso Bridge Co., Owego, N. Y.

Pobenix Iron Co., Philadelphia, Pa.

Republic Iron & Steel Co., Youngstown, O.

Republic Iron & Steel Co., Youngstown, O.

Riter-Conley Mfg. Co., Pittaburg, Pa.

Boanoke Bridge Co., Boanoke, Va.

Boanoke Bridge Co., Boanoke, Va.

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Schreiber & Sons Co., The L., Cincinnati, O.

Shead Architectural Iron Works, Louisville, Ky.

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Vincennes Iron & R. R. Co., Birm'gh'm, Als.

Vincennes Iron & L. Co., Roanoke, Va.

Lork Bridge Co., Vork, Pa.

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Sugar-Mill Machinery. ratt Engineering & Mach. Co., Atlanta, Ga

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Super-Heaters. (Steam.) theock & Wilcox Co., New York, N. Y. wer Specialty Co., New York, N. Y.

Surveying Instruments. Keuffel & Esser, Hohoken, N. J. Weber & Co., F., Philadelphia, Pa.

Switchboards, Switches, etc. Doubledny-Hill Electric Co., Pittsburg, Pa., hongherg's Elect. & Mech. Wroks, St. Joseph, Mo. tort Wayne Electric Works, Atlanta, Ga., ieneral Electric Co., Schenectady, N. Y. Veatinghouse Electric & Mrg. Co., Pittsburg, Pa.

Switches. [See Railroad Frogs and Switches.] Switchstands.

American Valve & Meter Co., Cincinnati, O. Weir Frog Co., Cincinnati, O. Tachometers. (Electric.) Electric Speedometer Co., Washington, D. C.

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atterson Co., W. W., Pittsburg, Pa.

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Tanks. (Iron and Steel.)

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Telephones. (Supplies, Equipment.) Doubleday-Hill Electric Co., Pittsburg, Pa. Piedmont Electric Co., Asheville, N. C. Western Electric Co., New York, N. Y.

Telephone Cable.

Western Electric Co., New York, N. Y.

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Terra-cotta. Terra-cotta.
Atlanta Terra-Cotta Co., East Point, Ga.
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Pomona Terra-Cotta Co., Pomona, N. C.
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Stevens' Sone Co., H., Macon, Ga.

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American Compressor & Pump Co., Baltimore, Md.
Chicago Pneumatic Tool Co., Chicago, Ill.
Independent Pneumatic Tool Co., Chicago, Ill.
Ingersoll-Rand Co., New York, N. Y.

Torches.

[all Mfg. Supply Co., P., Allegheny, Pa.

Towers. (Steel and Wood.)

Baltimore Cooperage Co., Baltimore, Md.
Caldwell & Co., Inc., Wm. B., Loulsville, Ky.
Chattanoga Boller & Tank Co., Chat'n'ga, Tenn.
Chicago Bridge & Iron Wks., Chicago, Ill.
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Consolidated Tramway Co., Roanoke, Va. Northern Engineering Works, Detroit, Mich. Speidel, J. G., Reading, Pa.

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Broderick & Bascom Rope Co., St. Louis, Mo.
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Caldwell & Sons Co., H. W., Chicago, Ill.
Link-Belt Co., Nicetown (Philadelphia), Pa.

Transformers.
ocker-Wheeler Co., Ampere, N. J.
oloney Electric Co., St. Louis, Mo.
dumph Electric Co., Cincinnati, O.

Triumpa Bactus
Trench Excavator.
American Steel Dredge Co., Ft. Wayne, Ind.
Fairbanks Steam Shovel Co., Marion, O.
Monighan Machine Co., Chicago, Ill.

Trucks. (Motor.)
Kelly Motor Truck Co., Springfield, O.
Trucks. (Platform, Freight, Mill. Factory, etc.) Clark Co., Geo. P., Windsor Locks, Conn. Howe Scale Co., New York, N. Y. Rome Scale & Mfg. Co., Rome, Ga.

Trucks. (Storage Battery Auto.) Testinghouse Machine Co., Pittsburg, Pa

Trucks. (Wood and Steel for Portable Ma-Electric Wheel Co., Quincy, Ill. Empire Manufacturing Co., Quincy, Ill.

Trust Companies, [See Bankers and Brokers.] Tube Well Strainers. Cook Well Co., St. Louis, Mo.

Tubes. (Boiler.) Tubes. (Boiler.)
Allegheny Steel Co., Pittsburg, Pa.
Cincinnati Iron & Steel Co., Cincinnati, O.
National Tube Co., Pittsburg, Pa.

Tubing.
Field & Co., Inc., Philadelphia, Pa.
La Belle Iron Works, Steubenville, O.
National Tube Co., Pittsburg, Pa.
Youngstown Sheet & Tube Co., The, Youngstown, O.

Turbines. (Hydraulic.)
Allis-Chalmers Co., Milwaukee, Wis.
Allis-Chalmers Co., Milwaukee, Wis.
Davis Foundry & Machine Works, Rome, Ga.
Davis Foundry & Machine Works, Rome, Ga.
Osyton, C., Ceffel & Co., James, Springfield, O.
Poole Engineering & Much. Co., Baltimore, Md.
Smith Co., S. Morgan, York, Pa.
Frump Mfg. Co., Springfield, O.

Turbines. (Steam.)

Allis-Chalmers Co., Milwankee, Wis.

De Laval Steam Turbine Co., Trenton, N. J.

Emerson Steam Pump Co., Alexandria, Va.

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heeler Condenser & Eng. Co., New York, N. Y. Turntables.

ultimore Bridge Co., Baltimore, Md. irginia Bridge & Iron Co., Roanoke, Va.

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Twine.

American Manufacturing Co., New York, N. Y.
Columbian Rope Co., Auburn, N. Y.
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Turner Co., J. Spencer, New York, N. Y.
Whitlock Cordage Co., New York, N. Y.

Twine Machinery. Haskell-Dawes Machine Co., Boston, Mass. Twisting Machinery.
askell-Dawes Machine Co., Boston, Mass.

Vacuum Cleaning Apparatus. Blaisdell Machinery Co., Bradford, Pa.

Unions. Dart Manufacturing Co., E. M., Providence, R. I.

Valves.

Bourbon Copper & Brass Wks. Co., Cincinnati, O. Columbian Iron Works, Chattanooga, Tenn.

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General Fire Extinguisher Co., Providence, R. I. Glamorgan Pipe & Foundry Co., Lynchburg, Va. Jenkins Bros., New York, N. Y.

National Tube Co., Pittsburg, Pa.

Powell Co., Wm., Cincinnati, O.

Wolf & Co., Fred W., Chicago, Ill.

York Mfg. Co., York, Pa.

Berry Bros., Ltd., Detroit, Mich.

Veneer Machines. Titus, E. E., Petersburg, Va.

Ventilating Apparatus. (Engineers' and Contractors'.) tractors'.)

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Blaisdell Machinery Co., Bradford, Pa.
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Sturtevant Co., B. F., Hyde Park, Mass.

Ventilators. Merchant & Evans Co., Philadelphia, Pa.

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Eagle Wagon Works, Auburn, N. Y.
Troy Wagon Works Co., Troy, O.

Wall Plugs, (Galvanized.) Niagara Falls Metal Stamping Works, Niagara Falls, N. Y. Wicks & Co., Milton O., Glen Cove, N. Y.

Wall Ties Wall 11es.
Niagara Falls Metal Stamping Works, Niagara
Falls, N. Y.
Page Woven Wire Fence Co., Adrain, Mich.

Washers. (Ore and Phosphate.) Balley-Lebby Co., Charleston, S. C. Cameron & Barkley Co., Charleston, S. C. McLanshan-Stone Mach. Co., Hollidaysburg, Pa.

Washers and Rivets [See Bolts, Nuts, Rivets, Studs and Washers.] Water Filters. [See Filters, Water, for Domes-

tic and Industrial Purposes.]

Water Meters. merican Valve & Meter Co., Cincinnati, O.

Waterproofing. (For Concrete.) Barrett Mfg. Co., Philadelphia, Pa. National Roofing Co., Tonawanda, N. Y.

Waterproof Compound. (Liquid.) arolina Portland Cement Co., Charleston, S. C. ational Roofing Co., Tonawanda, N. E.

Water-Softening Apparatus. (Purifying.) Water-Softening Apparatus. (Puritying.)
American Water Softener Co., Philadelphia, Pa.
Dodge Manufacturing Co., Mishawaka, Ind.
Kennicott Co., Chicaco Heights, Ill.
N. Y. Cont. Jewell Filtration Co., New York, N. Y.
Roberts Filter Mfg. Go., Philadelphia, Pa.
Scaffe & Sons Co., Wm. B., Pittsburg, Pa.
Tucker & Laxton, Charlotte, N. C.

Water Supply Systems. (Town, Heme, Railroad, etc.) Rife Engine Co., New York, N. Y.

Water-Wheels. [See Turbines. (Hydraulic.)],

Water-Works Supplies and Appliances. Water-Works Supplies and Appliances.
American Cast Iron Pipe Co., Birmingham, Aia.
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Bourbon Conper & Brass Wiss. Co., Cincinnati, O.
Coldwell-Wilcox Co., Newburgh, N. Y.
Columbian Iron Works, Chattanoga, Tenn.
Glamorgan Pipe & Foundry Co., Lynchburg, Va.
Keystone Pump & Well Eng. Co., Beaver Falls, Pa.
Leudite Co., The, Philadelphia, Pa.
McWane Pipe Works, Lynchburg, Va.
Pomona Terra-Cotta Co., Pomona, N. C.
Stevens' Sons Co., H., Macon, Ga.
U. S. Cast Iron Pipe & Fdry. Co., New York, N. Y.

Weigher. (Recording Liquid.) Worthington, Henry R., New York, N. Y.

Well Contractors. (Oil, Artesian, etc.)
Cook Well Co., The, St. Louis, Mo.
Harper, Henry W., Danielsville, Ps.
Hughes Specialty Well Drill. Co., Charleston, S. C.
Sydnor Pump & Well Co., Richmond, Va.

Well Tools and Supplies. Cook Well Co., The, St. Louis, Mo. Keystone Pump & Well Eng. Co., Beaver Falls, Pa. Williams Bros., Ithaca, N. Y.

Wheels and Axles. Electric Wheel Co., Quincy, III. Empire Manufacturing Co., Quincy, I Oliver Mfg. Co., W. J., Knoxville, Ter

Wheelbarrows and Trucks.
Syracuse Chilled Plow Co., Syracuse, N. Y.

Wheels. (Steel and Steel Tired.) Carnegle Steel Co., Pittsburg, Pa. Empire Manufacturing Co., Quiney, III.

Window Frames and Sashes. (Fireproof.) Detroit Steel Products Co., Detroit, Mich. United States Metal Products Co., New York, N. Y. Voigtmann & Co., Chicago, III.

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Wire insulating. General Electric Co., Schenectady, N. Y.

Wire. (Barbed Wire, etc.)

American Steel & Wire Co., Chicago, III.
Roebling's Sons Co., J. A., Trenton, N. J.
Youngstown Sheet & Tube Co., Youngstown, O.

Wire Cloth. (Iron, Steel, Brass, etc.)

American Steel & Wire Co., Chicago, III.
Caldwell & Sons Co., The H. W., Chicago, III.
Clinton Wire Cloth Co., Clinton, Mass.
Diamond Wire Products Co., Columbus, O.,
Meyers Mfg. Co., Fred J., Hamilton, O.,
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Wight & Co., W. N., New York, N. Y.

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Wire Goods.
Bolles Iron & Wire Works, J. E., Detroit, Mich.
Buckeye Wire & Iron Works Co., Columbus, O.
Cincinnati Mfg. Co., Cincinnati, O.
Diamond Wire Products Co., Columbus, O.
Dow Wire Works Co., Louisville, Ky.
Dufur & Co., Baltimore, Md.
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Wire Rope.

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oungstown Sheet & Tube Co., Youngstown, O.

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nerican Hoist & Derrick Co., St. Paul, Minn. oderick & Bascom Rope Co., St. Louis, Mo. Wood Blocks. (For Paving and Factory Floors.) U. S. Wood Preserving Co., New York, N. Y.

Woodboring Machines. Chicago Pneumatic Tool Co., Chicago, Ill. Ingersoll-Rand Co., New York, N. Y.

Wood-Fiber Plaster. King & Co., J. B., New York, N. Y. Wood Pipe. (For Water, etc.) Wyckoff & Son Co., A., Elmira, N. Y.

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Smith-Courtney Co., Richmond, Vs.
Smith Machine Co., H. B., Smithville, N. J.
Wilmington Iron Works, Wilmington, N. C.
Vance & Co., J. A., Salem, N. C.

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Barrett Mfg. Co., Philadelphia, Pa.
Carolina Portland Coment Co., Charleston, S. C.
National Roofing Co., Tonawanda, N. Y.

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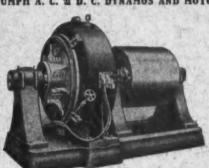
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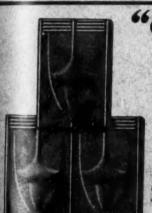
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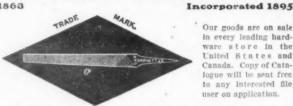
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